PLETHO'S CALENDAR AND LITURGY

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Part I

Pletho's Calendar and Liturgy

Part II

Pletho and Islam

PART I. PLETHO'S CALENDAR AND LITURGY [1]

I. INTRODUCTION

WHEN Pletho attended the Council of Ferrara-Florence (1438–39) as technical adviser to the Greek delegation, he was probably over 80.[2] In spite of his advanced age, he played an important role both in his official capacity [3] and in the course of informal talks with the Italian prelates and scholars who had been attracted to Ferrara and Florence by the sessions of the Council. His learning, eloquence, and dialectical skill made a profound impression, and captivated the imagination of the Italians, whose high regard for him seems not to have been adversely affected either by his espousal of the doctrines and traditions of the Greek Orthodox

[1] This paper, a revised version of a chapter taken from my doctoral dissertation (Harvard, 1940), owes much to Professor George La Piana, who first directed me to the study of Pletho. I am grateful to Professor Harry A. Wolfson and Dr. Alexander Pogo for a number of valuable suggestions, and I am indebted, also, for assistance of various sorts, to Professors Robert P. Blake, William B. Dinsmoor, Albert M. Friend, Jr., Kurt von Fritz, Moses Hadas, Werner W. Jaeger, Paul O. Kristeller, O. Neugebauer, and George Sarton.

[2] The assumption that Pletho was born *ca.* 1355 rests upon the statement of George of Trebizond that he was about 100 at the time of his death (in 1452); see Fritz Schultze, *Georgios Gemistos Plethon u. seine reformatorischen Bestrebungen, Geschichte d. Philosophie d. Renaissance*, 1 (Jena, 1874), 24. For the literature on Pletho see E. Stéphanou, 'Études récentes sur Pléthon,' *Échos d'Orient*, 31 (1932), 207–17; *idem*, *s.v.* Pléthon, DTC, 12.2 (1935), 2393–2404; *idem*, 'Ἡ εἱμαρμένη ἐν τῷ φιλοσοφικῷ συστήματι τοῦ Πλήθωνος,' Εἰς Μνήμην Σπυρίδωνος Λάμπρου (Athens, 1935), 315–20. To the titles mentioned by Stéphanou, add: Henri Grégoire, 'Les manuscrits de Julien et le mouvement néo-païen de Mistra,' *Byzantione*, 5 (1929–30), 730–36; Martin Jugie, 'La date de la mort de Gémistos Pléthon,' *Échos d'Orient*, 34 (1935), 160 f.; *idem*, 'La polémique de Georges Scholarios contre Pléthon,' *Byzantion*, 10 (1935), 517–30; Bohdan Kieszkowski, 'Georgios Gemistos Pleton,' *Przegląd Filozoficzny*, 36 (1933), 26–50; *idem*, *Platonizm renesansowy* (Warsaw, 1935), *passim*, with new text in appendix III; *idem*, *Studi sul Platonismo del rinascimento in Italia* (*Pubblicazioni della Scuola di Filosofia della R. Università di Roma*, 9 [Florence, 1936]), 13–36 and *passim*; Aubrey Diller, 'A geographical treatise by Georgius Gemistus Pletho,' *Isis*, 37 (1937), 441–51; and J. P. Mamalakis, Γεώργιος Γεμιστὸς Πλήθων (*Texte u. Forschungen zur Byzantinisch-Neugriechischen Philologie*, Nr. 32 [Athens, 1939]), a monograph of 269 pages. Mamalakis gives a lucid semi-popular account of Pletho's works and the main results of modern criticism, without presenting any original research of his own. Cf. BZ, 31 (1931), 126, 231, 412, on Täschner (see n. 28 *infra*). I have not seen G. Hofmann, 'Humanismus in Concilio Florentino,' *Acta Academiae Velehradensis*, 15 (1939), 193–211.

[3] Sylvester Sguropulus (properly Syropulus), *Vera historia unionis non verae inter Graecos et Latinos sive Concilii Florentini exactissima narratio*, ed. with Latin transl. by Robert Creyghton (Hagae Comitis, 1660), 161 and *passim*; Ducas, *Historia Byzantina*, 31, ed. I. Bekker (Bonn, 1834), 213.23–214.1.

Church [4] against the claims of the See of Rome, or by his unwillingness [5] to join Bessarion, George Scholarius, and the other Byzantine champions of the short-lived union of the Greek and Roman Churches. His sharpest opponents were not the Italian humanists, but Greeks like George Scholarius, George of Trebizond, Matthew Camariotes, and Theodore of Gaza.

Marsilio Ficino credited him with having inspired Cosimo de' Medici with the project of founding the Platonic Academy of Florence,[6] and the humanist Platina, the author of the famous *Vitae pontificum Romanorum*, says that Pletho was universally esteemed to be second only to Plato.[7] With similar exuberance, Pletho's former pupil, Cardinal Bessarion, who remained loyal to his master notwithstanding the philosophical and theological differences that had come between them, pronounced Pletho to be the wisest Greek since Plato or Aristotle, adding that, if it were possible to accept the Pythagorean and Platonic doctrine of the ascent and descent of souls, he would not hesitate to affirm that the soul of Plato, in obedience to immutable destiny, had chosen to dwell in the body of Pletho, the boast of all Greece, and her adornment in future generations.[8] The effect of these rather

[4] Cf. Gregorius Monachus's eulogy of Pletho published by C. Alexandre in his edition of Pletho's *Nomoi* (cited hereafter as Alexandre), 389.4 ff.; MPG, 160, 982AB.

Scholarius himself soon repudiated the union: L. Petit, etc., edd., *Oeuvres complètes de Gennade Scholarios*, 1 (Paris, 1928), 1 f., 372–5, and *passim*; 2 (1929), entire vol.; 3 (1930), vii-xvii, 1–204; 8 (1936), app., 25 and *passim*.

For the latest literature on the Council of Florence, see Ludwig Mohler, *Kardinal Bessarion als Theologe, Humanist u. Staatsmann*, 3, *Aus Bessarions Gelehrtenkreis. Abhandlungen, Reden, Briefe von Bessarion, Theodoros Gazes, Michael Apostolios, Andronikos Kallistos, Georgios Trapezuntios, Niccolò Perotti, Niccolò Capranica* (*Quellen u. Forschungen aus dem Gebiete d. Geschichte*, herausg. von d. Görres-Gesellschaft, 24 [Paderborn, 1942]), xii, 649 pp., inaccessible to me; Louis Bréhier, *Vie et mort de Byzance* (Paris, 1947), 490–98, 509–12; and my note in *Speculum*, 23 (1948), 128.

[5] Syropulus, *op. cit.*, 243, 159 f., 161 f., 170 f., 257, and *passim*; Ludwig Mohler, *op. cit.*, 1 (*Quellen u. Forschungen*, 20 [Paderborn, 1923]), 348 f.; Fritz Schultze, *op. cit.*, 63 ff.

[6] In the preface to his translation of Plotinus, ed. F. Creuzer, *Plotini opera omnia*, 1 (Oxford, 1835), xvii: Magnus Cosmus, Senatusconsulto patriae pater, quo tempore Concilium inter Graecos atque Latinos sub Eugenio pontifice Florentiae tractabatur, philosophum Graecum nomine Gemistum, cognomine Plethonem, quasi Platonem alterum, de mysteriis Platonicis disputantem frequenter audivit. E cuius ore ferventi sic afflatus est protinus, sic animatus, ut inde Academiam quandam alta mente conceperit: hanc opportuno primum tempore pariturus. Ficino's testimony on this point seems hardly open to question, although Arnaldo della Torre (*Storia dell' Accademia Platonica di Firenze* [Florence, 1902], 426 ff., 443 ff., 456 ff., 530 ff., and *passim*) points out that Italian scholars like Leonardo Bruni had become acquainted with Plato at least a generation before Pletho's journey to the west, and that the Platonic Academy was not actually founded until 1462. Cf. Paul O. Kristeller, *The philosopy of Marsilio Ficino* (N. Y., 1943), 15, 18.

[7] In his panegyric on Bessarion, quoted by Alexandre, xi: Postremo autem, ne aliquid tanto ingenio deesset, Platonem (*leg.* Plethonem) quem alii Gemisto (*leg.* Gemiston) vocant, doctissimum praeceptorem et quem omnes secundum a Platone vocant. . . .

[8] For the text see Alexandre, 404 f., appendix xv; cf. MPG, 161, 689D, 692A; Ludwig

extravagant sentiments, which occur in a letter of consolation addressed to Pletho's sons after the death of their father, is heightened by three effusive elegiac distichs,[9] and by a note sent by Bessarion to a certain Nicholas Secundinus to accompany copies of the letter and the verses. Bessarion warns Secundinus that his praise of Pletho should not be taken as hyperbole, but rather as a sincere tribute to the noblest, the wisest, and the most learned man he had ever met.[10]

The panegyrics which put Pletho in the same category with Plato, though fulsome when judged by modern canons of criticism, were no doubt influenced by Pletho's enthusiasm for Plato, and by the two treatises in which he expounds the superiority of Plato to Aristotle.[11] Plato was always in the forefront of Pletho's thought.[12] He is cited in the *Nomoi*, which has many points of contact with Plato's dialogue of the same name, not only in the second chapter, in the bibliography,[13] but also in the preface,[14] in which the theology of the work is stated to have been based upon Zoroaster and Plato. Pletho's acknowledgment in the same preface of indebtedness to Sparta in the sphere of political theory, recalling as it does similar partiality for Lacedaemon on the part of Socrates,[15] is another instance of dependence upon Plato, as is also the concluding remark that Pletho had improved upon his Spartan models by the elimination of some of the harshness characteristic of Lacedaemon, and by recourse to philosophy, the application of which to government is pronounced by him to be the most important feature of the Platonic polity.[16] Moreover, approximately one half of Pletho's *De gestis Graecorum post pugnam ad Mantineam*,[17] an historical summary taken largely from Plutarch and Diodorus Siculus, treats of events in Sicily during the reign of the Dionysii and gives special attention to Plato's attempts to

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Mohler, *op. cit.*, 1, 339 f. and *passim*. In a marginal note said to be in Bessarion's own hand (Jacopo Morelli, *Bibliotheca manuscripta Graeca et Latina* [Bassani, 1802], 212 [Codex 333]), Pletho is placed second only to Plato and the other men of highest distinction (*τοὺς πρώτους ἐκείνους ἄνδρας*).

[9] Alexandre, appendix xvi, 406.

[10] *Ibid.*, appendix xvii, 407 f.

[11] Printed in MPG, 160, 889–934, 979–1020; see W. Gass, *Gennadius u. Pletho, Aristotelismus u. Platonismus in der griechischen Kirche* (Breslau, 1844), pt. 1, 24 ff.; pt. 2, 54–116.

[12] John W. Taylor, *Georgius Gemistus Pletho's Criticism of Plato and Aristotle* (Menasha, Wis., 1921), 37 and *passim*.

[13] See *infra*, pp. 190 f.

[14] Alexandre, 2.

[15] Plato, *Crito*, 52E.

[16] *Loc. cit.*, *Ἡ βίβλος ἥδε περιέχει . . . Πολιτείαν δὲ Λακωνικήν, ἀφῃρημένου μὲν αὐτῆς τοῦ ἄγαν τῆς σκληραγωγίας καὶ τοῖς γε πολλοῖς οὐκ εὐπαραδέκτου, προστιθεμένης δὲ τῆς ἐν τοῖς ἄρχουσι μάλιστα φιλοσοφίας, τοῦ κρατίστου δὴ τούτου τῶν Πλατωνικῶν πολιτευμάτων.*

[17] Ed. by H. G. Reichard, *Γεωργίου* (*sic*) *Γεμιστοῦ τοῦ καὶ Πλήθωνος Ἑλληνικῶν Βιβλία β′* (Leipzig, 1770).

translate his political principles into practice. Pletho was obviously greatly impressed by Plato's Sicilian adventures, and seems, in planning his own career, to have made a conscious effort to follow Plato's example.[18] Indeed, the very name Pletho (Πλήθων), which George Gemistus (Γεώργιος Γεμιστός) affixed to his own after 1439, he chose because of its resemblance to that of the ancient philosopher.[19]

In addition to a number of learned tracts on such subjects as the incarnation of Jesus Christ and the Procession of the Holy Spirit, Pletho wrote numerous works on rhetoric, history, philosophy, politics, national defense, geography, mathematics, astronomy, and music.[20] The longest of these, and the most important, is the *Nomoi*.[21] In this book Pletho set forth a new system of philosophy, by which he hoped to replace the Christian religion and help restore Greece to her ancient glory. Christianity is never directly mentioned in the extant fragments; and the *Nomoi* is so frankly pagan and so outspokenly polytheistic that the humanist George Scholarius, the first Patriarch of Constantinople after the fall of the city in 1453, felt constrained to consign it to the flames, saving only a few folia in order to prove that Pletho had lapsed into paganism and that the *Nomoi* was, therefore, justly suppressed.[22] The present investigation, being confined to the calendar and liturgy of the *Nomoi*, and the hypothesis of Pletho's indebtedness to Islam, deals with only a few of the many problems with which students of the *Nomoi* must contend.

II. PLETHO'S CALENDAR[23]

All that remains of Pletho's chronological system is a small fragment of the twenty-first chapter of the first book of the *Nomoi*. This section of his work can best be discussed on the basis of a translation:

ON THE CULT OF THE GODS

[We prescribe, Pletho says] the use of the natural month and year, reckoning the month according to the moon and the year according to the sun at the solstices, starting

[18] See J. Dräseke, 'Zu Platon u. Plethon,' *Archiv f. Geschichte d. Philosophie*, 27 (N.F. 20, 1913), 288–94.

[19] This seems to be a reasonable interpretation of the attempts at exegesis made by Pletho's friends and enemies, for a summary of which see Schultze, *op. cit.*, 72–74, and Alexandre, xix.

[20] Details, titles, etc. are given by Alexandre, introduction, *passim*; J. A. Fabricius, *Bibliotheca Graeca*, 12, ed. G. C. Harless (Hamburg, 1809), 85–102; MPG, 160, 773–94.

[21] The extant remains are to be found in Alexandre, 1–261.

[22] *Ibid.*, appendix xix, 412–41; edd. Petit, etc., 4, 171.34–172.3. Although the word Christian does not occur in the *Nomoi*, there are a number of references that cannot be understood except as oblique allusions to Christian beliefs and practices: see n. 429 *infra* and Alexandre, lii.

[23] Alexandre, 58–62. Περὶ θεῶν θεραπείας . . . καὶ μὲν δὴ καὶ μησὶ καὶ ἔτεσι τοῖς γε κατὰ φύσιν χρῆσθαι, μησὶ μὲν κατὰ σελήνην ἀγομένοις, ἔτεσι δὲ πρὸς τὰς ἡλίου τροπάς, καὶ τούτων τὰς χειμερινάς,

with the winter solstice, when the sun, having departed farthest from us, sets out again on its way back. The day of conjunction of the sun and moon, as determined by the most skilful astronomers, is called *ἕνη καὶ νέα* (the day of the old and the new moon). The next day, commencing with the first midnight after the conjunction of the two divinities [i.e., the sun and the moon], is known as *νουμηνία* (new moon day), from which are counted all the rest of the days of the month, 30 in number for the full months and 29 for the hollow months. The evening of each night belongs to the previous day, the dawn to the next, midnight forming the dividing line between two days. The days of the month are counted thus [see scheme, p. 219, *infra*]: after new moon day comes the second of the beginning of the month (*ἱσταμένου*), then the third, and so on up to the eighth. After the eighth *ἱσταμένου* come the seventh of the middle of the month (*μεσοῦντος*), then the sixth, and so on retrogressively to the second, which is followed by *διχομηνία* (mid-month). Then we count the second of the waning month (*φθίνοντος*), the third, and so on up to the eighth. Thereafter come the seventh of the ending month (*ἀπιόντος*), the sixth, and so on retrogressively to the second, which is followed by the old moon day, and that in turn, in a full month, by the day of the old and the new moon. In a hollow month, however, the day of the old and the new moon comes right after the second *ἀπιόντος*. The first month of the year is that which is immediately preceded by the conjunction after the winter solstice; this month is succeeded in arithmetical order by the other months, twelve in number in some years, thirteen in others, a month being intercalated whenever the twelfth month fails to reach the winter solstice. To determine the solstices of the sun [we make use of] the most accurate sun dials that can be produced . . .

Pletho's calendar figures prominently in the *περὶ μηνῶν* of Theodore of Gaza, who tells us [24] that Pletho used numerical designations for his months (first, second, third, etc. instead of the Attic or Roman names), and that the division of the month into four parts was intended to simplify the distribution of the new holy days Pletho had instituted. In the course of his work Theodore gives a fairly complete outline of this calendar in its extant

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ἀποκαθισταμένοις, ὅτε τὸ πλεῖστον ἡμῶν ὁ ἥλιος ἀποκεχωρηκὼς τῆς πρὸς ἡμᾶς αὖθις ἄρχεται προσόδου. Ἕνην μὲν οὖν καὶ νέαν ἄγειν, ᾗ ἂν ἡμέρᾳ ἡλίῳ ἡ σελήνη συνιοῦσα ὑπὸ τῶν ἀστρονομίας ἐμπειροτάτων κρίνηται. Τὴν δ' ἑξῆς νουμηνίαν, ἧς ἂν ἡγοῖντο μέσαι νύκτες αἱ μετὰ τὴν τοῖν θεοῖν εὐθὺς σύνοδον, ἀφ' ἧς τὰς λοιπὰς ἁπάσας ἡμέρας τοῦ μηνὸς ἀριθμεῖν, τοὺς μὲν πλήρεις τε καὶ τριακονθημέρους ἄγοντας τῶν μηνῶν, τοὺς δὲ κοίλους τε καὶ μιᾷ τῶν ἑτέρων ἡμέρᾳ λειπομένους. Καὶ γὰρ αὖ καὶ τῶν νυκτῶν ἑκάστων τὴν μὲν ἑσπέραν τῇ οἰχομένῃ ἡμέρᾳ, τὸν δ' ὄρθρον τῇ ἐπιούσῃ λογίζεσθαι, καὶ τὰς μέσας νύκτας ἀμφοῖν εἶναι ὅρον τοῖν ἡμέραιν. Ἀριθμεῖσθαι δὲ καὶ ὧδε τὰς μηνὸς ἑκάστου ἡμέρας· μετὰ μὲν νουμηνίαν, δευτέραν ἱσταμένου, καὶ τρίτην, καὶ ἑξῆς, ἐς τὸ πρόσω ἰόντι ἄχρις ὀγδόης· μετὰ δ' ὀγδόην ἱσταμένου ταύτην ἑβδόμην αὖ μεσοῦντος, εἶτα ἕκτην, καὶ ἑξῆς, ἀναστρέψαντι ἄχρι δευτέρας, μεθ' ἣν διχομηνίαν· εἶτα δευτέραν, αὖ φθίνοντος, καὶ τρίτην, καὶ ἑξῆς, ἐς τὸ πρόσω αὖ ἰόντι ἄχρις ὀγδόης· μεθ' ἣν αὖ ἑβδόμην ἀπιόντος, εἶτα ἕκτην, καὶ ἑξῆς, ἀναστρέψαντι αὖ ἄχρι δευτέρας· μεθ' ἣν ἕνην, εἶτα ἕνην τε καὶ νέαν, τοῦ μηνὸς πλήρους γιγνομένου. ἣν δὲ κοῖλος ὁ μὴν γίγνηται, μετὰ δευτέραν ἀπιόντος ἕνην τε καὶ νέαν εὐθύς. Τοῦ δ' ἔτους νέον μὲν μῆνα ἄγειν οὗ ἂν ἡγοῖτο σύνοδος ἡ μετὰ χειμερινὰς εὐθὺς τροπάς, ἀφ' οὗ τοὺς λοιποὺς ἀριθμεῖν μῆνας, τὰ μὲν δωδεκάμηνα, τὰ δὲ καὶ τρισκαιδεκάμηνα ἄγοντας, τὸν ἐκ τῶν ἐμβολίμων γε ἑκάστοτε μῆνα ἐπεμβάλλοντας, ἐπειδὰν ὅ γε δωδέκατος τῶν χειμερινῶν μὴ ἐφίκηται τροπῶν. Ἡλιοτροπίοις δέ τισιν ἐς τὸ ἀκριβέστατον κατεσκευασμένοις κατὰ δύναμιν τὰς ἡλίου κρίνειν τροπάς . . . [ms. breaks off here].

On *ἕνη καὶ νέα*, see nn. 220, 238–40 *infra*.

[24] MPG, 19, 1168B.

form. He comments on a number of details (such as the choice of a starting point for the day and for the year, Pletho's alleged ignorance of the names and proper sequence of the Attic months, the use of a luni-solar calendar, and the calculation of the intercalary month). The only additional information he provides concerns the innovations in the heortologion. From him we learn that, of the six monthly holidays envisaged by Pletho, ἔνη was dedicated to Pluto, ἔνη καὶ νέα was intended for self-criticism and scrutiny, and νουμηνία was consecrated to Zeus;[25] but he gives no data on the other three. Considering these circumstances and the late date of the περὶ μηνῶν (1470),[26] it is not impossible that Theodore had seen this portion of the *Nomoi* before its destruction by fire [*ca.* 1456–57], as Alexandre maintains,[27] but that after the years which had elapsed between 1456 and 1470 he could not remember very much to supplement the extant text.

III. SOURCES: GENERAL INDICATIONS

The question of sources, always of importance in literary and historical studies, takes on added interest here because of the attempt of Franz Täschner to prove that Pletho had been influenced by Islamic models.[28] Täschner's argument that the lunar elements in Pletho's calendar are of great weight in this connection, and his whole theory of Pletho's dependence upon Islam will be examined in Part II. Unlike the Byzantine writers who copy out the texts of their predecessors verbatim, Pletho, whose scope was encyclopaedic and covered practically the whole range of Greek literature, ancient and medieval, usually reproduces thoughts and ideas, rather than words and phrases. Nevertheless, it is sometimes possible to identify the texts upon which he relied. As the following analysis will show, every element of Pletho's calendar can be traced back to the Greeks, and, for the most part, to the writers he cites in the course of his works. He makes no direct quotations in his chapter on the calendar, but he gives a number of valuable hints both in the *Nomoi* and elsewhere. Chief among these is the bibliographical sketch in the second chapter (περὶ ἡγεμόνων τῶν βελτίστων λόγων) of the first book of the *Nomoi*, in which he lists his principal authorities, of whom the most relevant to the present investigation are Zoroaster,

[25] *Ibid.*, 1208A, 1209C.
[26] *Ibid.*, 1205D, 1216C.
[27] Alexandre, xcii f.
[28] 'Georgios Gemistos Plethon, ein Beitrag zur Frage der Übertragung von islamischem Geistesgut nach dem Abendlande,' *Der Islam*, 18 (1929), 236–43; 'G. G. Plethon, ein Vermittler zwischen Morgenland u. Abendland zu Beginn der Renaissance,' BNJ, 8 (1929–30), 100–113.

Numa, the Magi of Media, Solon, Pythagoras, Plato, Plutarch, Plotinus, Porphyry, and Iamblichus.[29] Also of the highest importance for Pletho was Aristotle, who is mentioned frequently in the two works on Plato,[30] and once in a prefatory note to the *Nomoi*, in which he is named as the main source in the field of physics.[31]

Of the large number of authors studied by Pletho and included among his excerpts from ancient and medieval texts, the most germane here are: 'Orpheus' (various *Orphica*), Pythagoras (*Pythagorica*), Thucydides, Xenophon, Aristotle, Aristoxenus, Theophrastus, Polybius, Diodorus Siculus, Dionysius Halicarnassus, Strabo, Ptolemy, Appian, Aelian, Aristides Quintilianus, Proclus, and Zonaras.[32] In addition, as we learn from his correspondence with Bessarion on philosophical subjects, he was acquainted with Julian, Syrianus, Hermeias, Ammonius, Damascius, Olympiodorus, Simplicius, and a certain Maximus;[33] and he cites Alexander Aphrodisiensis,[34] as well as a number of Christian writers, notably Justin Martyr, Gregory of Nazianzus, Cyril of Alexandria, the pseudo-Dionysius the Areopagite, John Philoponus, John of Damascus, and Cydones.[35] Moreover, he had studied the ancient poets, as George Scholarius remarks;[36] and in his extant works, there are quotations from Hesiod,[37] Pindar,[38] and Euripides.[39]

Of all these Pletho was most profoundly influenced by Plato and Proclus, the latter of whom, George Scholarius declares, though the most important source of the *Nomoi*, Pletho had deliberately omitted from his bibliography in order to conceal the extent of his obligation.[40] While it cannot be denied that Proclus is not named in the *Nomoi*, it should be said that Pletho does mention Proclus several times in his other works.[41] (Of the hosts of inscriptions upon which Dinsmoor, Ferguson, Meritt, Pritchett, Neugebauer, and

[29] Alexandre, 26 ff.; see also MPG, 160, 983C, 1002C, and n. 17 *supra* (Plutarch).

[30] See n. 11 *supra*.

[31] Alexandre, 4.3.

[32] *Ibid.*, vii f.; MPG, 160, 774–94; Morelli, *Bibliotheca manuscripta*, 269 ff.

[33] MPG, 161, 713D–724B; for Simplicius, see also MPG, 160, 981BC.

[34] MPG, 160, 901D.

[35] *Ibid.*, 978CD, 983B, 1002C. On Pletho's connection with John Philoponus and Psellus, see J. W. Taylor, *Georgius Gemistus Pletho's criticism of Plato and Aristotle*, 71 n. 194; cf. p. 222, *infra*. Taylor's statement (33 n. 17), that Pletho wrote scholia on a work of Psellus, rests upon a misapprehension; Gallaeus's edition of the *Oracula Sibyllina* (Amsterdam, 1689), appendix, 80 ff., reproduces the commentaries of Psellus and Pletho on the *Oracula Chaldaica*; it contains no scholia of Pletho on Psellus.

[36] Edd. Petit, etc., 4, 152.31 f.

[37] *MPG*, 160, 944D.

[38] *Ibid.*, 912B.

[39] *Ibid.*, 1019A.

[40] Edd. Petit, etc., 4, 153.19 ff., 162.12 ff.; Alexandre, 424.7 ff. See n. 554 *infra*.

[41] MPG, 160, 981C; MPG, 161, 717BC, 718C, 719C. Cf. n. 32 *supra*.

others [42] have drawn to reconstruct the history and development of the ancient Greek calendar, I have made little use, chiefly because of the impossibility of demonstrating that Pletho had any contact with them.)

IV. THE LUNI-SOLAR CALENDAR

It is significant that the fragment of the *Nomoi* containing Pletho's calendar occurs in the chapter entitled *περὶ θεῶν θεραπείας*.[43] This fact in itself proves that Pletho, like the ancient Greeks, regarded the calendar as intimately bound up with the cycle of religious festivals.[44] The Greeks of antiquity reckoned the month by the moon, but kept the solar year in order to perform the same sacrifices at the same seasons of the year. As Geminus [45] puts it:

The men of ancient times preferred to calculate the month by the moon and the year by the sun. For, throughout Greece, the prescription of the laws and the oracles that sacrifices should be performed according to three units (the month, the day, and the year)[46] was understood as requiring that the year be reckoned by the sun, and the day and the month by the moon. Reckoning the year by the sun means that the same sacrifices to the gods are performed at the same seasons of the year, that the spring sacrifice is always performed in the spring, and the summer sacrifice in the summer, and, similarly, that the rest of the sacrifices take place in the appropriate seasons of the year. [The Greeks] deemed this [arrangement] welcome and pleasing to the gods, but impossible unless the solstices and the equinoxes fell in the same months [each year]. Reckoning the days by the moon means that the names of the days match the phases of the moon.

[42] On these, see W. B. Dinsmoor: *The Archons of Athens in the Hellenistic Age* (Cambridge, Mass., 1931), 295–440; *The Athenian Archon list in the light of recent discoveries* (N. Y., 1939); 'Archaeology and astronomy,' *Proceedings of the American Philosophical Society*, 80 (1939), 95–173; W. K. Pritchett and O. Neugebauer, *The calendars of Athens* (Cambridge, Mass., 1947); W. K. Pritchett, 'Julian dates and Greek calendars,' *Classical Philology*, 42 (1947), 235–43; and the works of B. D. Meritt, etc., mentioned by Dinsmoor and cited *infra*.

[43] Alexandre, 58 (*Nomoi*, 1, 21).

[44] See T. L. Heath, *Aristarchus of Samos* (Oxford, 1913), 284; and three studies by M. P. Nilsson: *Die Entstehung u. religiöse Bedeutung des griechischen Kalenders* (*Lunds Universitets Årsskrift*, N.F., Avd. 1, Bd. 14.2, Nr. 21 [1918]), 21 ff., 25, 31 ff., 50 ff., and *passim* (cited below as *Entstehung*); 'Die älteste Zeitrechnung, Apollo u. der Orient,' ARW, 14 (1911), 423–48; and *Primitive time-reckoning* (Lund, 1920), 363 ff.

[45] *Eisagoge*, 8, 6–10 (102.8–26): *πρόθεσις γὰρ ἦν τοῖς ἀρχαίοις τοὺς μὲν μῆνας ἄγειν κατὰ σελήνην, τοὺς δὲ ἐνιαυτοὺς καθ' ἥλιον. τὸ γὰρ ὑπὸ τῶν νόμων καὶ τῶν χρησμῶν παραγγελλόμενον, τὸ θύειν κατὰ γ' [ἤγουν τὰ πάτρια], μῆνας, ἡμέρας, ἐνιαυτούς, τοῦτο διέλαβον ἅπαντες οἱ Ἕλληνες τὸ τοὺς μὲν ἐνιαυτοὺς συμφώνως ἄγειν τῷ ἡλίῳ, τὰς δὲ ἡμέρας καὶ τοὺς μῆνας τῇ σελήνῃ. ἔστι δὲ τὸ μὲν καθ' ἥλιον ἄγειν τοὺς ἐνιαυτοὺς τὸ περὶ τὰς αὐτὰς ὥρας τοῦ ἐνιαυτοῦ τὰς αὐτὰς θυσίας τοῖς θεοῖς ἐπιτελεῖσθαι καὶ τὴν μὲν ἐαρινὴν θυσίαν διὰ παντὸς κατὰ τὸ ἔαρ συντελεῖσθαι, τὴν δὲ θερινὴν κατὰ τὸ θέρος, ὁμοίως δὲ καὶ κατὰ τοὺς λοιποὺς καιροὺς τοῦ ἔτους τὰς αὐτὰς θυσίας πίπτειν. τοῦτο γὰρ ὑπέλαβον προσηνὲς καὶ κεχαρισμένον εἶναι τοῖς θεοῖς. τοῦτο δ' ἄλλως οὐκ ἂν δύναιτο γενέσθαι, εἰ μὴ αἱ τροπαὶ καὶ αἱ ἰσημερίαι περὶ τοὺς αὐτοὺς μῆνας γίνοιντο. τὸ δὲ κατὰ σελήνην ἄγειν τὰς ἡμέρας τοιοῦτόν ἐστι τὸ ἀκολούθως τοῖς τῆς σελήνης φωτισμοῖς τὰς προσηγορίας τῶν ἡμερῶν γίνεσθαι.* Cf. *ibid.*, 8, 15 (106.4–8), and n. 89 *infra*. For the beginning of the passage quoted, see n. 67 *infra*.

[46] I translate the text as emended by Nilsson, *Entstehung*, 3, 45 n. 2, who brackets *ἤγουν τὰ πάτρια* and retains the *γ'* and the *μῆνας, ἡμέρας, ἐνιαυτούς* rejected by Manitius.

Two separate but closely related concepts are involved here. (1) The first concerns the performance of sacrifice to the gods in the proper seasons of the year, but with the retention of the lunar month, which in ancient Greece had been the chief framework of the religious calendar. (2) The second concerns the luni-solar character of the year in general. It is impossible to say whether Pletho knew Geminus's Εἰσαγωγὴ εἰς τὰ φαινόμενα (*Elementa astronomiae*, referred to *infra* as the *Eisagoge*). A fragment quoted as from Geminus by two writers known to Pletho (by Alexander Aphrodisiensis in the third century, and thence by Simplicius in the sixth) may have been taken from a lost section of the *Eisagoge*, although this has been doubted. There is another equally uncertain reminiscence of the *Eisagoge* in Priscianus Lydus.[47] On the other hand Proclus, who was one of Pletho's important authorities, cites the geometrical writings of Geminus frequently in the course of his commentary on Euclid.[48] It would seem likely that Pletho would have had to use the *Eisagoge* as well as Ptolemy's *Mathematike Syntaxis* in his own astronomical work, the μέθοδος εὑρέσεως ἡλίου καὶ σελήνης, συνόδων τε ἡλίου καὶ σελήνης καὶ πλανητῶν τε καὶ σελήνης, καὶ τῆς τῶν ἀστέρων ἐποχῆς, ἀπὸ κανόνων οὓς αὐτὸς συνεστήσατο,[49] but this cannot be determined without a study of the Mss. of the Μέθοδος. In any case, there is evidence for the existence of one Greek codex of the *Eisagoge* in the eighth century that served as the basis for an Arabic translation, and of a number of others dating from the fourteenth and fifteenth centuries.[50]

But whether Pletho had access to Geminus or not, the two concepts succinctly stated in the above passage obviously rest upon more ancient texts, presumably the ultimate sources of Pletho no less than of Geminus himself.

1. SACRIFICE TO THE GODS IN THE PROPER SEASONS OF THE YEAR

Among the witnesses to the first of these two principles are two passages from Herodotus. In the first, Solon, the lawgiver, in the course of a discussion with Croesus on the limit of man's life, is represented as mentioning the intercalary month and the 'lengthening of a second year by a month, so that the seasons may come round at the proper time.' In the second, a comparison of the chronological methods of the Egyptians and the Greeks,

[47] See Manitius's edition of Geminus, *Eisagoge*, 283–5; cf. C. Tittel, *s.v.* Geminus, PW, 7 (1912), 1027 f., 1036–8.

[48] Proclus, *In primum Euclidis Elementorum librum commentarii*, ed. G. Friedlein (Leipzig, 1873), index, *s.v.*; C. Tittel, *loc. cit.*, 1038 ff.

[49] Fabricius-Harless, *Bibliotheca Graeca*, 12, 93 gg; Alexandre, 445 n. 2.

[50] Manitius, *op. cit.*, xxiv, xiv f., vi ff.

quoted by Theodore of Gaza in his *De mensibus*, Herodotus declares that he prefers the Egyptian scheme to that of the Greeks, who 'add an intercalary month every third year, so that the seasons may agree.' [51]

Perhaps of even greater weight is the testimony of Plato in the *Laws*, the prototype of Pletho's own treatise of the same name. At one point here, Plato draws attention to the revolutions of the heavenly bodies, and refers to:

> The stars and sun and moon, and the various regulations about these matters which are necessary for the whole state – I mean the arrangements of days in periods of months, and of months in years, which are to be observed, in order that seasons and sacrifices and festivals may have their regular and natural order, and keep the city alive and awake, the Gods receiving the honors due to them, and men having a better understanding about them.[52]

A little further along in the argument provision is made for monthly sacrifices to the twelve gods, with choruses and musical and gymnastic contests assigned 'so as to suit the gods and the seasons of the year.' [53]

2. THE LUNI-SOLAR YEAR

The second of the two principles set forth by Geminus in the lines quoted at the head of this section, that of the luni-solar year, is a commonplace in ancient Greek literature in general, as well as in the authors with whom Pletho was most familiar. Thus, Plato in the *Timaeus* states that 'the month ends when the moon completes her orbit and overtakes the sun, and the year when the sun completes his orbit.' [54] This sentence from the *Timaeus* is quoted verbatim in the commentary of Proclus (*In Timaeum*, 3, 86), who frequently alludes to the luni-solar calendar.[55] Similar definitions were available to Pletho in Aristotle ('the sun in the course of the year brings the season of winter and that of summer, as does the moon in the month, not in the latter instance by the solstices but by the waxing and waning of her light'),[56] and in Plutarch ('the sun produces the year, and the moon the months').[57] Likewise, from Diodorus Siculus, who is one of the two chief sources of his *De gestis Graecorum post pugnam ad Mantineam* and whose *Bibliotheca historica* he had excerpted, he would have learned that the

[51] Herodotus, 1, 32; 2, 4; Theodore of Gaza, MPG, 19, 1188C, 1197C; cf. n. 146 *infra*.

[52] 7, 809CD; I have used Jowett for most of my translations from Plato.

[53] *Ibid.*, 8, 828BC; cf. Aristophanes, *Clouds*, 558–68; Plutarch, *Julius Caesar*, 59.

[54] 39C.

[55] Proclus, *In Timaeum*, 3, 36.10 ff., 39.21 ff.; *In Rem Publicam*, 2, 58.10 ff., 18.18 ff., 16.8 f.

[56] *De generatione animalium*, 4, 2, 767a.5–8: ὁ μὲν γὰρ ἥλιος ἐν ὅλῳ τῷ ἐνιαυτῷ ποιεῖ χειμῶνα καὶ θέρος, ἡ δὲ σελήνη ἐν τῷ μηνί. τοῦτο δ' οὐ διὰ τὰς τροπάς, ἀλλὰ τὸ μὲν αὐξανομένου συμβαίνει τοῦ φωτός, τὸ δὲ φθίνοντος.

[57] *Aetia Romana*, 77 (282C): ποιεῖ δ' ὁ μὲν ἥλιος τὸν ἐνιαυτόν, ἡ δὲ σελήνη τοὺς μῆνας.

luni-solar year was in general use among the ancient Greeks;[58] and in the commentary of Simplicius on Aristotle's *Physics*, he would have found evidence that the Greeks were still using the luni-solar calendar in the sixth century.[59]

Prohibition by the Council in Trullo (692) of the pagan rite of leaping across fire, celebrated on the first day of the moon (*νουμηνία*),[60] that is at the beginning of the new month, may indicate that the luni-solar calendar had persisted as late as the seventh century, although the word *νουμηνία* itself by that time had in all probability lost much of its lunar connotation and had come to mean little more than 'holiday.'[61] Notwithstanding its rejection as the norm of the civil chronology, however, the luni-solar calendar of the pagan Greeks, was taken over by the Greek Orthodox Church for the calculation of Easter, having been naturalized by Hippolytus[62] in the third century, and is still retained for this purpose. Wholly apart from these survivals, the fact that the ancient Greeks regulated their year by both the sun and the moon is attested not only by Romans of the classical period like Cicero and Censorinus,[63] but also by a number of medieval authors, Greek,[64] Latin,[65] and Arabic.[66]

V. INTERCALATION

The luni-solar calendar as defined in Pletho's sources involved the intercalation of a thirteenth month in certain years, in order to maintain a balance between the solar and lunar years. The additional month was required because of the difference in length between a year measured by the sun and a year measured by the moon. That is to say, since the mean solar year consists of approximately 365¼ days, and the mean lunar year of 354, the lunar

[58] *Bibliotheca historica*, 1, 50, 2; 12, 36, 3.

[59] Simplicius, *In Aristotelis Physicorum libros quattuor posteriores commentaria*, ed. H. Diels (Berlin, 1895), 875.7 f., 19–23.

[60] J. D. Mansi, *Sacrorum conciliorum nova et amplissima collectio*, 11 (Florence, 1765), 973A.

[61] M. P. Nilsson, *Entstehung*, 37; cf. nn. 314–17 *infra*.

[62] See Charles W. Jones, *Bedae opera de temporibus* (Cambridge, Mass., 1943), 11 ff. Although Jones discusses a few of the early Greek writers like Hippolytus and Eusebius, he is concerned almost exclusively with the Latin West and does not deal with the Byzantine computists.

[63] Cicero, *In Verrem*, 2, 2, 52, 129; Censorinus, *De die natali*, 18, 2 (36.22 ff.).

[64] On these, see *infra*, p. 196 and n. 178.

[65] Macrobius, *Saturnalia*, 1, 13, 8–10, ed. F. Eyssenhardt (Leipzig, 1893), 67.4 ff.; Bede, *De temporum ratione*, ed. Charles W. Jones, *op. cit.*, 208.72 ff.

[66] Al-biruni, *The book of instruction in the elements of the art of astrology*, ed. and transl. R. R. Wright (London, 1934), 171 (c. 278); cf. *idem*, *Chronology of the ancient nations*, transl. E. Sachau (London, 1879), 31.26 ff. (for the Callippic cycle), 182.19, 24.

new year day will precede the solar new year day by roughly 11¼, 22½, 33¾, 45, and 360 days after one, two, three, four, and thirty-two years respectively. As these differences accumulate, the lunar year drifts farther and farther away from the solar. In a purely lunar year, for example, like that of the Mohammedans, a festival celebrated one year in the middle of winter would fall a few years later in the middle of the summer, and would revolve through all the seasons in endless succession. The problem, therefore, for the ancient Greeks, since they wished to combine two incommensurables, the solar and lunar years, in a single chronological system despite the disparity between them, was 'to find a period of time that would include whole numbers of days, months, and years.' [67]

Of their attempts to do this Pletho would presumably have been well informed. Some see in Homer's mention of thirteen months as the term of Ares's bondage a reference to the intercalary month, and an indication that the Greeks were familiar with some cyclical method of harmonizing solar and lunar measurements as early as Homer's day.[68] But this is far from certain, and the first scientific method of harmonizing the lunar and solar year known to the Greeks,[69] apart from the so-called *dieteris* of Herodotus,[70] was the eight year cycle, the *octaeteris*, the invention of Eudoxus of Cnidus (4th c. B.C.) or Cleostratus of Tenedos (6th c. B.C.), which provided for the intercalation of a thirteenth month three years in every eight.[71] The *octaeteris* is mentioned in the *De placitis philosophorum* of the pseudo-Plutarch,[72] and is described by George Syncellus, George Monachus,[73] Suidas, and the pseudo-Zonaras.[74] It was actually adopted for paschal reckoning in the third

[67] Geminus, *Eisagoge*, 8, 6 (102.5–8): ἐπεὶ ⟨οὖν⟩ οὔτε ὁ μὴν ἐξ ὅλων ἡμερῶν συνέστηκεν οὔτε ὁ καθ' ἥλιον ἐνιαυτός, ἐζητεῖτο [οὖν] χρόνος ὑπὸ τῶν ἀστρολόγων, ὃς περιέξει ὅλας ἡμέρας καὶ ὅλους μῆνας καὶ ὅλους ἐνιαυτούς. The rest of this passage is quoted in n. 45 *supra*.

[68] *Iliad*, 5, 387; Adolf Schmidt, ed. Franz Rühl, *Handbuch d. griechischen Chronologie* (Jena, 1888), 63. Eustathius, *ad loc.*, *Commentarii ad Homeri Iliadem*, 1 (Leipzig, 1828, sumtibus J. A. G. Weigel), 37.30 ff. (560.38 ff.), applies τρισκαιδεκάμηνον to the orbit of the planet Ares, but gives no exegesis.

[69] *Supra*, p. 192; M. P. Nilsson, *Entstehung*, 43–47, and *idem*, *Primitive time-reckoning*, 367 f., maintains that the luni-solar cycle was introduced into Greece from Babylonia *via* Asia Minor, along with the worship of Apollo, during the seventh century B.C.; cf. n. 80 *ad fin.*

[70] *Supra*, pp. 193 f.

[71] Censorinus, *De die natali*, 18, 5 (37.18 ff.); Dinsmoor, *Archons of Athens*, 304 ff., 360 ff.; F. Blass, *Eudoxi ars astronomica qualis in charta aegyptiaca superest denuo edita* (Kiliae, 1887), 14, 16, 18, 20, etc.

[72] Ed. H. Diels, *Doxographi Graeci* (Berlin-Leipzig, 1929), 363.16 f. = Plutarch, *De plac. phil.*, 2, 32 (892C); Stobaeus, *Eclogae*, 1, 8, 42C (1, 107.19 ff.).

[73] George Syncellus, *Chronographia*, ed. W. Dindorf, 1 (Bonn, 1829), 611.5–14, 613.15–20; George Monachus, *Chronicon*, ed. C. de Boor, 1 (Leipzig, 1904), 306.15–21.

[74] Suidas, *s.v.* ἐνιαυτός (2, 284.8–13); pseudo-Zonaras, *Lexicon*, 1, 717 f. The text of the pseudo-Zonaras here is identical with that of Suidas, except for a few minor variants, all of which can be explained transcriptionally as scribal errors or misconceptions.

century by the scholarly Hippolytus (who used a double *octaeteris* of 16 years), by his contemporary, Bishop Dionysius of Alexandria,[75] and at the end of the fourth century by Epiphanius of Cyprus, who explains the discrepancy between the lunar and solar years and the method of intercalating so as to preserve the desired chronological balance.[76] Although it reckoned the lunar month and solar year too short by as much as 51 minutes and 19 seconds, and 5 hours, 48 minutes, 46 seconds respectively,[77] the *octaeteris* can be attested for the year 1079 (or 1179),[78] and even as late as the fifteenth century.[79]

Greatly superior to the *octaeteris* was the *enneakaidekateris*, which was first introduced by the Athenian astronomer, Meton, in 432/1 B.C., and which required the intercalation of a thirteenth month seven years in every nineteen.[80] This cycle, the use of which is attested by a number of Greek inscriptions, is mentioned in the works of Theophrastus, Diodorus Siculus (who says, among other things, that meteorological phenomena and the movement of the stars vindicate Meton's system), the pseudo-Plutarch, and Aelian, and by the scholiasts on the *Birds* of Aristophanes and the *Phae-*

[75] Eusebius, *Ecclesiastical history*, 6, 22; 7, 20: edd. Eduard Schwartz, T. Mommsen, *Eusebius Werke*, 2.2 (Leipzig, 1908), 568.13 ff., 674.8 ff. Cf. C. W. Jones, *op. cit.*, 11–14.

[76] *Panarion*, 3, 70, 13, 1–6, and *passim*, ed. Karl Holl, 3 (Leipzig, 1933), 246.10 ff. Cf. John Philoponus, *De opificio mundi*, 4, 14 (188.15–22); John of Damascus, *De fide orthodoxa*, 2, 7 (=21), MPG, 94, 896D–897B.

[77] Geminus, *Eisagoge*, 8, 27–49 (110.21–120.3); Dinsmoor, *Archons of Athens*, 303 ff.

[78] *Anecdota Graeca*, ed. J. A. Cramer, 1, 379.16–29. Two dates ($\varsigma\phi\pi\zeta' = 1079$ and $\varsigma\chi\pi\zeta' = 1179$) occur in close juxtaposition (354.8, 32–355.1). The text is taken from *Parisinus Graecus 854* (f. 192 ff.), which is assigned to the 13th century by Henri Omont, *Inventaire sommaire des mss. grecs de la Bibliothèque Nationale*, 1 (Paris, 1886), 160.

[79] Ed. O. Schissel, 'Neue Zeugnisse für die ὀκταετηρίς,' *Hermes*, 72 (1937), 323 ff.; *idem*, 'Berechnung des Sonnen-, Mond- u. Schaltjahrszirkels in d. griechisch-christlichen Chronologie,' BZ, 42 (1942), 150–57. Cf. G. F. Unger, *Zeitrechnung d. Griechen u. Römer* (ed. Iwan v. Müller, *Handbuch d. klassischen Altertumswissenschaft*, 1 [2d ed., Munich, 1892]), 757–71, who argues that what he calls a 'freie Oktaëteris' was widely used until the end of the Middle Ages; *contra*: F. K. Ginzel, *Handbuch d. mathematischen u. technischen Chronologie*, 2 (Leipzig, 1911), 462 ff. Neither Unger nor Ginzel makes use of the texts referred to in this note and the preceding one.

[80] The date had once been doubted, but Dinsmoor, *Archons of Athens*, 321 ff., shows that the Metonic cycle was actually inaugurated in this year; so B. D. Meritt, *Athenian calendar in the fifth century* (Cambridge, Mass., 1928), 101 f. Geminus, *Eisagoge*, 8, 50 (120.4–7), omitting the name of Meton, ascribes the discovery of the *enneakaidekaeteris* to Euctemon, Philippus, and Callippus. But Ptolemy, *Mathematike Syntaxis*, 3, 1 (1, 207.9 ff.) and *passim*, associates it with Meton, as do Vettius Valens, *Anthologiae*, ed. W. Kroll (Berlin, 1908), 353.10 ff., Theon of Alexandria, *op. cit.*, 3, 838.12–841.6, and Theodosius (fl. between 180 and 25 B.C.), *De diebus et noctibus liber alter*, ed. Rudolf Fecht, *Abhandlungen d. Ges. d. Wiss. zu Göttingen*, Philolog.-hist. Kl., N.F., 19.4 (Berlin, 1927), 152.1–154.7.

In Babylonia the 19-year cycle was first discovered *ca.* 480 B.C.: Otto Neugebauer, 'The "Metonic Cycle" in Babylonian astronomy. Studies in ancient astronomy, VI,' *Studies and essays in the history of science and learning in honor of George Sarton* (N. Y., 1946), 433–48.

nomena of Aratus.[81] All of these, except the last two, are authors either excerpted or specifically mentioned by Pletho in his works. But these literary and historical texts, which give only a few data, such as that the *enneakaidekaeteris* was founded by Meton upon his observation of the solstices, and that Meton and his followers recorded the results of their investigations (dates of the solstices, etc.) in stone, on stelae, provide no adequate foundation for astronomical calculation.

More important for this purpose are the Byzantine discussions of the *enneakaidekaeteris* as a basis for the computation of Easter. Being one of the leading theologians of the Greek Church, as he was even at the time of the composition of the *Nomoi*, Pletho would have been acquainted with this use of the *enneakaidekaeteris* and with one or more of the many Byzantine computistic works devoted to the analysis and description of the astronomical character of the lunar and solar years, and of the method of interpolating seven intercalary months in every 19 year period. The *enneakaidekaeteris* was introduced into the Church, Eusebius tells us in the *Ecclesiastical History*, by Anatolius, one time professor of philosophy at Alexandria, and subsequently bishop of Laodicea (in the latter part of the third century). Ananias of Shirak (*ca.* 600–650) says Anatolius had two predecessors, Aristides of Athens, and Leonidas (the father of Origen), to the former of whom, the famous apologist of the early second century, he seems to attribute the first construction of the *enneakaidekaeteris*.[82] However this may be, there is no doubt that the 19 year luni-solar cycle was adopted at an early period by the Greek Church, and eventually by the Western church as well, the 19 year lunar period being combined in both East and West with a 28 year solar period in a special luni-solar cycle of 532 years.[83]

Of the numerous paschal tables and computistic manuals based upon the *enneakaidekaeteris*, at least some of which must have been available to Pletho, the following may be mentioned: the *Chronicon Paschale* (*ca.* 630–41), which comprises a number of elements of much earlier date, and the

[81] Theophrastus, *De signis temporum*, 1, 4; Diodorus Siculus, *Bibliotheca historica*, 12, 36, 2 f., cf. 2, 47, 6; ps.-Plutarch (n. 72 *supra*); Aelian, *Varia historia*, 10, 7; sch. on Aristophanes, *Birds*, 997 (233.16 ff.); on Aratus, *Phaenomena*, 752 (478.5 ff., cf. 47.20 ff.). On these texts, see Dinsmoor, *Archons of Athens*, 297–311; Schmidt-Rühl, *Handbuch*, 429 ff.

[82] *Ecclesiastical history*, 7, 32, 6 ff., 14 ff., edd. Schwartz, Mommsen, 2.2, 718.13 ff., 722.13 ff.; Ananias of Shirak, transl. F. C. Conybeare, BZ, 6 (1897), 578.

[83] For the 532 year cycle in the Byzantine Church, see MPG, 19, 1233–36, 1252 f., 1281 plus 1289, and the texts cited in n. 84 *infra*. The parallel development in the West is reviewed by C. W. Jones, *op. cit.*, 44, 63 ff., 290, 391. Of the later literature inaccessible to Jones, note especially the catalogue of Latin *computi* published by A. Cordeliani, 'Les traités de comput du haut moyen âge (526–1003),' *Archivum Latinitatis medii aevi* [*Bulletin Du Cange*], 17 (1943), 51–72. Cf. B. Bischoff, 'Ostertagtexte u. Intervalltafeln,' *Historisches Jahrbuch*, 60 (1940), 549–80; Harriet P. Lattin, 'The eleventh century MS Munich 14436,' *Isis*, 38 (1948), 217 ff.

treatises of George the Presbyter (638–39), Maximus the Confessor (640–41), John of Damascus (760),[83a] Michael Psellus (1091–92), Matthew Blastares (1335), Isaac Argyrus (1372), Pseudo-Argyrus (1377), the so-called Andrew of Crete (late fourteenth century), and a number of other handbooks of the same sort.[84] In addition Pletho could hardly have been altogether unfamiliar with the works of Nicephorus Gregoras, the polymath and historian of the fourteenth century, who prepared handy tables founded upon the 19 year cycle to simplify the computation of the date of Easter, and did research looking toward a reform of the calendar along the lines finally incorporated by Gregory XIII in 1582 in what is now known as the Gregorian calendar.[85] The computists in general give no indication that the *enneakaidekaeteris* was of pagan origin, and the *Chronicon Paschale* even claims it as a discovery of the 'fathers' of the Church,[86] but both Suidas and the lexicon of the pseudo-Zonaras call it the 'year of Meton,' as do Tzetzes (in his *Historiarum variarum Chiliades*), the paroemiographers, and the Scholiasts on Aristophanes and Aratus.[87] The expression, Μέτωνος ἐνιαυτός, as we learn from the paroemiographers, even crept into popular speech, and was used to mock people who made long postponements, of whom it was said, 'They're putting it off till Meton's year.'[88]

Important as the Byzantine computists must have been for Pletho, there is little doubt that he would have had recourse also to pagan astronomical authorities like Ptolemy (whose researches provided the framework, and most of the substance, of Byzantine astronomy), Theon, Proclus, and Gem-

[83a] So dated in BZ, 35 (1935), 80, and *ibid.*, 42 (1942), 151 (see next note), although John of Damascus died in 749 (S. Vailhé, EO, 9 [1906], 28–30).

[84] To the references and literature given by F. Buchegger, 'Wiener griechische Chronologie von 1273,' BNJ, 11 (1934–5), 34 f., add *Chronicon Paschale*, ed. L. Dindorf, 1 (Bonn, 1832), 18.7 ff., 22.19–27.3, 26, 534; 2, 216.22 ff.; John of Damascus, MPG, 19, 1297 f.; Photius, *Bibliotheca*, codex 116, MPG, 103, 392B–393A (cf. codex 115); O. Schissel, 'Berechnung des Sonnen-, Mond- u. Schaltjahrszirkels in d. griechisch-christlichen Chronologie,' BZ, 42 (1942), 150–57; *idem*, 'Die Osterrechnung des Nikolaos Artabasdos Rhabdas,' BNJ, 14 (1938), 43–59; *idem*, 'Note sur un catalogus codicum chronologorum Graecorum,' *Byzantion*, 9 (1934), 269–95; G. Redl, BZ, 35 (1935), 80–82. Cf. pseudo-Cyril of Alexandria, MPL, 54, 601–6 (C. W. Jones, *op. cit.*, 38). See n. 100 *infra*.

[85] MPG, 19, 1313–16; *idem*, *Historia Byzantina*, 8, 13, ed. L. Schopenus, 1 (Bonn, 1829), 364–73. Cf. R. Guilland, *Essai sur Nicéphore Grégoras* (Paris, 1926), 282–5; *idem*, *La correspondance de N.G.* (Paris, 1927), iii, xiii; S. Bezdechi, 'Un projet de réforme du calendrier par Nicéphore Grégoras,' *Mélanges d'histoire générale*, ed. C. Marinescu (Cluj, 1927), 68–74.

[86] *Loc. cit.*, 1, 18.4–19.6, etc.

[87] See n. 74 *supra*. Tzetzes, *op. cit.*, ed. Theophilus Kiesslingius (Leipzig, 1826), 12, 125–257 (cf. 10, 534 ff.), stresses the importance of Meton's 'predecessors' — Atlas, Orpheus, Homer, Hesiod, etc. For the scholiasts, see n. 81 *supra*.

[88] *Paroemiographi Graeci*, 1, 433, no. 88: Μέτωνος ἐνιαυτός: Μέτων Ἀθηναῖος ἀστρολόγος, ὁ τὴν ἐννεακαιδεκαετηρίδα συνταξάμενος, καὶ ὀνομάσας ἐνιαυτόν. τοὺς οὖν μακρὰς ὑπερθέσεις ποιουμένους ἐπισκώπτοντες ἔλεγον, Ἀναβάλλεσθαι εἰς τὸν Μέτωνος ἐνιαυτόν.

inus. In the fullest extant account of these matters, that of the *Eisagoge* of Geminus, who made extensive use of the investigations of his predecessors, we find the principal facts on the duration of the lunar and solar years and of the chief Greek luni-solar cycles.[89] It is possible, of course, that Pletho may not have known Geminus, or the three pertinent works of Hipparchus, the *περὶ ἐνιαυσίου μεγέθους*, the *περὶ ἐμβολίμων μηνῶν τε καὶ ἡμερῶν*, and the *περὶ μηνιαίου χρόνου*, none of which is extant, though Ptolemy and Theon of Alexandria allude to the first two, and Galen refers to the third.[90] But he did have Ptolemy's *Mathematike Syntaxis* (known to the Arabs as the *Almagest*), which, we can hardly doubt, was one of the chief sources of his own *Μέθοδος*, and there he would have found Ptolemy's summary of the lost works of Hipparchus together with all the figures, in both lunar and solar terms, that are needed for computing the length of the luni-solar year.[91] He may also have met the same facts in the commentaries on Ptolemy's *Mathematike Syntaxis* by Pappus, Theon of Alexandria, and Proclus,[92] the last of whom was one of Pletho's favorite authors, while manuscripts containing the *Mathematike Syntaxis* with commentaries by Pappus, Theon, and Nicholas Cabasilas are known to have been in the library of Pletho's disciple, Bessarion.[93]

From one or more of these, or possibly from astronomical textbooks by John Tzetzes, Isaac Argyrus, Theodore Metochites, Nicephorus Gregoras, and Theodore Meliteniotes, most of which are still unpublished,[94] Pletho

[89] 8, 2–6, 26–60 (100.8–102.8, 110.13–122.23); see Dinsmoor, *Archons of Athens*, 299 ff.

[90] Ptolemy, *Mathematike Syntaxis*, 3, 1 (1, 206.24 f., 207.7 f., 20, and *passim*); Theon, *op. cit.*, 3, 838.26, 840.1, 841.8 f.; Galen, *περὶ κρισίμων ἡμερῶν*, 3, 4, ed. C. G. Kühn, *Medicorum Graecorum opera*, 9 (Leipzig, 1825), 907.15 ff.

[91] *Op. cit.*, 3, 1 (*περὶ τοῦ μεγέθους τοῦ ἐνιαυσίου χρόνου*), 4, 2 (*περὶ τῶν περιοδικῶν χρόνων τῆς σελήνης*), and 4, 3 (*περὶ τῶν κατὰ μέρος ὁμαλῶν κινήσεων τῆς σελήνης*).

[92] It is probable that Pappus's commentary on the *Mathematike Syntaxis* would have included these data, but the extant portion of this work covers only Bks. 5 and 6: A. Rome, *op. cit.*, 1, xvii f. The Hipparchan figures are reproduced by Theon in his commentary on the third and fourth books of the *Mathematike Syntaxis*: for the solar year, *op. cit.*, 3, 840.1–841.16, etc., and for the lunar month, *ibid.*, 995.4–6, etc. Cf. Proclus, *Hypotyposis astronomicarum positionum*, ed. Karl Manitius (Leipzig, 1909), 68.3 ff. (solar year). The cycles of Meton and Callippus are treated also in Theodosius, *De diebus et noctibus*, 2, 17 f., ed. Rudolf Fecht, *Abh. d. Gesellschaft d. Wiss. zu Göttingen*, Philolog.-hist. Kl., N.F., 19,4 (1927), 148–55; cf. on Aratus (n. 81 *supra*).

[93] For the list of Bessarion's books, see MPG, 161, 701–714; Henri Omont, 'Inventaire des mss. grecs et latins donnés à Saint Marc de Venise par le Cardinal Bessarion (1468),' *Revue des bibliothèques*, 4 (1894), 158 (nos. 230, 234, 245, 247, 248), 159 (nos. 257, 258). Cf. Morelli, *Bibliotheca manuscripta*, 191; A. Rome, *op. cit.*, 1, xxi; Konrat Ziegler, *s.v.* Theon (no. 15), PW, V A (1934), 2076 f.

[94] See Guilland, *Essai*, 278 f.; and Krumbacher, *Geschichte*, 2, 159, 535, 623. For Theodore Meliteniotes, see excerpts, ed. J. Heeg, *Catalogus codicum astrologorum Graecorum*, 5.3 (Brussels, 1910), 133–47 (*n.b.* 142.14–19); H. Usener, *Kleine Schriften*, 3 (Leipzig-Berlin,

would have discovered that two successive improvements had been made upon the Metonic 19 year cycle, the first by Callippus (330/29 B.C.) and the second by Hipparchus (146/45 B.C.). At the same time it would have been clear to him that the *enneakaidekaeteris* was not greatly affected by the refinements introduced by Callippus and Hipparchus, both of whom retained the basic intercalation of a thirteenth month seven times in every period of 19 years (making a total of 235 complete lunations every 19 years), although the Callippic cycle (ἑκκαιεβδομηκονταετηρίς) amounted to 76 years (19 x 4, with 27,759 days [(6940 x 4)–1], the year being computed at 365.25 days, and the lunar month at 29.530851)[95] and the Hipparchan to 304 years (76 x 4, with 111,035 days [(27,759 x 4)–1], the year being computed at 365.24671 days, and the lunar month at 29.530585).[96] All that Pletho would have required for the proper understanding of these three cycles is provided by a few words in the third book of the *Mathematike Syntaxis*:

> Again, after remarking in his treatise, *Concerning Intercalary Months and Days*, that the length of the year according to the school of Meton and Euctemon is 365¼ plus 1/76 [i.e., 365 5/19] days, and according to Callippus only 365¼ days, he [Hipparchus] continues in these words: 'We find that the number of whole months contained in the 19 years is the same as they make it, but that the year in actual fact contains 1/300th of a day less than the ¼ of a day which they give it, so that in 300 years there is a deficiency, in comparison with Meton's figures, of five days, and in comparison with Callippus's, of one day.' Then summing up his own view . . . he says: 'I have also discussed the length of the year in a book, in which I prove that the solar year, – that is, the length of time in which the sun passes from one solstice back to the same solstice, or from one equinox to the same equinox, – contains 365¼ days minus very nearly 1/300th of a day and night, and not exactly the one fourth which the mathematicians suppose it to have in addition to the said whole number of days.'[97]

From this paragraph, and the section preceding it on the Callippic cycle, both of which occur in Theon in somewhat expanded form,[98] Pletho could have learned the essential facts concerning the Metonic and Callippic cycles. Ptolemy does not actually give the number (235) of lunations

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1914), 360 ff.; and Giovanni Mercati, *Notizie di Procoro e Demetrio Cidone* (*Studi e Testi*, 56 [Rome, 1931]), 174–81, 189–91, 233–36 (on Meliteniotes and Argyrus).

[95] The Callippic cycle is described by Geminus, *Eisagoge*, 8,57–60 (122.8–23), Ptolemy, *op. cit.*, 3, 1 (1, 207.1 ff.), and Theon, *op. cit.*, 3, 839.1–840.4. Cf. Dinsmoor, *Archons of Athens*, 361 ff., 408 f., for the computations.

[96] Ptolemy, *op. cit.*, for the length of the solar year, 3, 1 (1, 206.24–208.14), and of the lunar month, 4, 2 (1, 271.9–12), 4, 3 (1, 278.3 ff.); Theon, *op. cit.*, 3, 840.1–841.20 (solar year), and 3, 995.4–6, 1027.16–1028.6 (lunar month).

[97] *Op. cit.*, 3, 1 (1, 207.7–208.2); the translation is taken from Dinsmoor, *Archons of Athens*, 408 f., with a few minor changes.

[98] *Loc. cit.* (in nn. 95 f.).

(complete lunar months) per *enneakaidekaeteris*, but this information is available in Geminus and in Theon, the latter of whom states that the cycle of Callippus included 940 conjunctions (i.e., 235 x 4 lunar months) and 29 intercalary days.[99] Geminus omits the Hipparchan data on the length of the lunar month, solar year, and luni-solar cycle, and Censorinus seems to be the only ancient authority who actually says that the Hipparchan luni-solar period lasted 304 years, although this figure could easily have been inferred. But Byzantine computists like Nicephorus Gregoras, Matthew Hieromonachus, Matthew Blastares, and Isaac Argyrus knew the 76 year cycle had been criticized as exceeding the true solar time by somewhat less than 1/300 of a day a year; and the last three named, all of whom flourished in the fourteenth century, allude to a cycle of 304 years.[100]

The question is, which of these cycles, if any, did Pletho adopt as his own? Scholars have usually assumed that Pletho used the Metonic *enneakaidekaeteris*, and Vincent has even calculated a specimen Plethonic calendar of New Year dates in Julian days on this basis.[101] It is not implausible that Pletho would have rejected the inaccurate *octaeteris* and the Callippic 76 year cycle; and he may well have spurned the Christian form of the *enneakaidekaeteris* (the 532 year cycle = 19 x 28) because of his antipathy to the Church. But if he had studied Ptolemy's *Mathematike Syntaxis*, as it is reasonable to believe that he had, it is difficult to see why he would have repudiated the Hipparchan 304 year cycle,[102] with its extraordinarily accurate computations of the length of the solar year and of the lunar month, which had the support and approbation of Ptolemy and Theon,[103] in favor of either the Metonic or the Callippic, which, according to Hipparchus and the Ptolemaic tradition, after 300 years exceeded the true solar time by five days and one day respectively.[104]

[99] *Eisagoge*, 8, 53 (120.18 ff.); Theon, *op. cit.*, 3, 839.1–10.

[100] Censorinus, *De die natali*, 18, 9 (38.18 f.); Nicephorus Gregoras, *Historia Byzantina*, 8, 13, ed. L. Schopenus, 1, 367.2 ff.; Matthew Hieromonachus, ed. Arthur Mentz, *Beiträge zur Osterfestberechnung bei den Byzantinern* (Königsberg i. Pr., 1906), 112, 118; Matthew Blastares, *Syntagma Alphabeticum*, II, 7, MPG, 145, 65C ff., *n.b.* 72A; Isaac Argyrus, MPG, 19, 1308B–1309A, 1312AB. This information stems from Ptolemy's *Mathematike Syntaxis* as quoted *supra*, either directly or mediately by way of some commentary like that of Theon. None of the Byzantine authors named here mentions Callippus, although Gregoras and Argyrus both refer to Ptolemy (the latter specifically to the *Syntaxis*), and Argyrus discusses the 76 year cycle.

[101] Alexandre, 444–55.

[102] Actually, Hipparchus's estimates exceed the correct figures for these two units by only 6 minutes 30 seconds and one half second respectively: Dinsmoor, *Archons of Athens*, 409.

[103] See texts cited in nn. 96 f.; Ptolemy, *op. cit.*, 3, 1 (1, 191.20), speaks of Hipparchus as φιλόπονός τε ὁμοῦ καὶ φιλαλήθης. Cf. *ibid.*, 203.12 ff., 204.1 ff.

[104] Dinsmoor, *Archons of Athens*, 310, 362; modern astronomers find the excess to be more than 6 days for the Metonic cycle (30 minutes, 11 seconds annually), and over two days for

The lost sections of Pletho's chapter on the calendar would undoubtedly have been explicit on this point. As it is, however, since the intercalation of a thirteenth month approximately every three years would have been required whether Pletho had depended upon his own astronomical observation or upon any one of the principal luni-solar cycles, we cannot be sure which of these two expedients he preferred. But his reference to the determination of the solstices by the most accurate instruments attainable [105] seems to indicate that he was not satisfied to regulate his year by theoretical considerations alone, as provided by the cycles, and that he proposed, so far as possible, to check the operation of the cycle annually, by empirical verification of the date of the winter solstice. To this decision he may well have been led both by the disagreements of the ancient astronomers on the length of the solar year (and of the lunar month), and by the conflict of authorities on the date of the winter solstice,[106] the precise and accurate calculation of the solstices being a matter of considerable difficulty, as Ptolemy and Theon point out.[107] Moreover, it is possible that he never contemplated a cyclical arrangement for his luni-solar years, and that the *Nomoi*, in its original form, as the last complete sentence (in n. 23 *supra*) perhaps suggests, would have had nothing to add to the extant text on the matter of intercalation. On this hypothesis, all that would be required would be the intercalation of a thirteenth month of 30 days approximately every two or

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the Callippic (11 minutes, 14 seconds annually). The Metonic lunar month was too long by one minute, 55 seconds, and the Callippic by 23 seconds.

[105] See p. 189 *supra*.

[106] Of the numerous dates given in the ancient sources, I note the following: Nov. 24: *Geoponica*, 1, 5, ed. H. Beckh (Leipzig, 1895), 10.8 ff.; Dec. 22: *Das Kalendarium des Antiochus*, ed. F. Boll, SB, Heidelberg, Philosoph.-hist. Kl., 1 (1910), 16. Abh., 16; Dec. 23: John Lydus, *De ostentis*, ed. C. Wachsmuth (Leipzig, 1897), 157.1 f. (Clodius); Dec. 24: pseudo-Geminus, *ibid.*, 189.3–5 (= MPG, 19, 925 f.); Dec. 26: Ptolemy, *Apparitiones*, ed. Wachsmuth, *ed. cit.*, 232.4–6 (= MPG, 19, 880D); Dec. 28: *Der Kalender des sogenannten Clodius Tuscus*, ed. L. Bianchi, SB, Heidelberg, etc., 5 (1914), 3. Abh., 48. Cf. Ptolemy, *Mathematike Syntaxis*, 3, 1 (1, 191.15 ff.); Theon, *op. cit.*, 3, 809.9 ff.

During the Middle Ages, the winter solstice according to the Julian calendar came several days before the traditional date of December 21/22. In the fifteenth century, for example, when the Julian calendar was nine days behind the true solar time, the Julian winter solstice fell on December 12/13. See Robert Schram, *Kalendariographische u. Chronologische Tafeln* (Leipzig, 1908), 62 f.

[107] *Mathematike Syntaxis*, 3, 1 (the whole chapter, but especially Heiberg, 1, 203.12–22: ἕνεκεν δὲ τοῦ καθόλου τε τὰς τῶν τροπῶν τηρήσεις δυσδιακρίτους εἶναι, etc.); Theon, *op. cit.*, 3, 837.11 ff. Ptolemy's observations of the solstices have been studied by A. Rome in his edition of Theon, *ibid.*, 3, 879 n. 5, and in two papers entitled 'Les observations d'équinoxes et de solstices dans le chapitre 1 du livre 3 du Commentaire sur l'Almageste par Théon d'Alexandrie,' *Annales de la Société Scientifique de Bruxelles. Série 1, Sciences mathématiques et physiques*, 57 (1937), 213–36; 58 (1938), 6–26. Cf. Joseph Fischer, *Claudii Ptolemaei Geographiae Codex Urbinas Graecus 82. Tomus Prodromus, De Cl. Ptolemaei vita, operibus, Geographia praesertim, eiusque fatis. Pars prior* (Leiden-Leipzig, 1932), 40–42.

three years, as for example in the scheme described by Theodore of Gaza, who makes no reference to any of the classical cycles.[107a]

As a matter of fact, Pletho's new year date, based upon observation, would not differ appreciably in any one or two *enneakaidekaeterides* from those compiled by Vincent. The differences would accumulate, however, with the passing of time; and the empirical method, if not well executed, might conceivably go far astray. On the other hand, had Pletho chosen the Hipparchan solar year (which exceeds the true solar year by only 6 minutes 30 seconds annually)[108] as the basis of his luni-solar cycle, the disparity between the true solar time and the cycle would have amounted to only a little more than 32 hours in 304 years. In any short term of years in Pletho's day, the empirical system was more likely to be inaccurate than the cyclical, because of the lack of an infallible method of determining the exact date of the solstice. In most cases a deviation of a few days, which it was all but impossible to avoid, would be of little importance and would not affect the date of the new year. But in a year in which the winter solstice occurred in close proximity to the day of the new moon, a faulty observation could easily advance or postpone the date of the new year by as much as a whole month.[109] These errors might prove to be cumulative, but the chances are that they would be rectified automatically in a year or so by new determinations of the solstice.[110]

VI. HELIOTROPION

The ἡλιοτροπίοις to which Pletho appeals as the final arbiters in the determination of the winter solstice were sundials of some sort or other. Though an instrument of the greatest simplicity, known and used by the Greeks at least as early as the sixth century before Christ, the ἡλιοτρόπιον, or ὡρολόγιον,

[107a] MPG, 19, 1212D–1213B. The Athenians themselves, though fairly consistent in the number of intercalations (7) for each Metonic cycle, did not adhere to any fixed pattern of alternation between intercalary and ordinary years: Pritchett-Neugebauer, *Calendars of Athens*, 6–10.

[108] Dinsmoor, *Archons of Athens*, 409.

[109] Suppose a new moon occurring just before the winter solstice to be regarded, erroneously, as following the solstice. It would then be considered the first new moon after the winter solstice, and as such the first day of the new year. This mistake would put new year's day one month too early. Conversely, suppose a new moon occurring after the winter solstice, and thus actually the first new moon of the new year, to be taken to be prior to the winter solstice. The error this time would involve the erroneous postponement of the new year by one whole month. For a convenient list of new moon dates between 1400 and 1453, see H. Grattan Guinness, *Creation centered in Christ*, Astronomical appendix (London, 1896), 504–13.

[110] Pletho no doubt had made provision for the intercalary *day* (the leap-year day), though the *Nomoi* in its extant form is silent about this. Cf. n. 149 *infra*.

as it was defined by both Suidas and the pseudo-Zonaras,[111] was of fundamental importance in computing the altitude of the sun and the length of the day, which are the most obvious measurable criteria of the rotation of the seasons, the longest day and the highest altitude of the sun (the shortest shadow cast by the gnomon of the sun-dial, or by any vertical object, at noon) marking the summer solstice, and the shortest day and lowest altitude of the sun (longest shadow at noon) marking the winter solstice. It was an *ἡλιοτρόπιον* that Meton is said by Philochorus to have erected in Athens, *ἐν τῇ νῦν οὔσῃ ἐκκλησίᾳ πρὸς τῷ τείχει ἐν τῇ πνυκί*.[112] The Byzantine Greeks were, of course, familiar with *ἡλιοτρόπια*, and Pletho had no doubt seen such famous structures as the *ὡρολόγιον* in the southwest court of the Church of Hagia Sophia in Constantinople, which seems to have been a 'semi-independent structure . . . provided not only with sundials and *clepsydrae* but also perhaps with a mechanical clock,'[113] as well as the *horologia* in the Church of SS. Sergius and Bacchus, in the imperial palace, and elsewhere in the Empire, if he did not know the references in the historians, chroniclers, lexicographers, and poets.[114]

[111] Suidas, *s.v.*: *ἡλιοτρόπιον*: *ὡρολογεῖον. ὅτι γνώμων ἐστὶ τὸ ἐν τοῖς ἡλιοτροπίοις πηγνύμενον, ὅπερ ἐφεῦρεν Ἀναξίμανδρος καὶ ἔστησεν ἐπὶ τῶν σκιοθήρων*. Pseudo-Zonaras, *Lexicon*, 1, 987: *ἡλιοτρόπιον*: *ὡρολογεῖον, ὡρολόγιον*. Theodore Meliteniotes, *εἰς τὴν Σωφροσύνην*, ed. Miller, *Notices et extraits des mss. de la Bibliothèque Impériale*, 19.2 (1858), 72, v. 1365 f. Cf. Paul Tannery, *Pour l'histoire de la science hellène* (2d ed., Paris, 1930), 85 ff.; Rehm, *s.v.* Horologium, PW, 8 (1913), 2419; H. Diels – W. Kranz, *Fragmente d. Vorsokratiker*, 1 (Berlin, 1934), 44.8 (Pherecydes of Syrus); Göttling, *De Metonis astronomi heliotropio Athenis in muro Pnycis posito* (Jena, 1861).

[112] Scholium on Aristophanes, *Birds*, 997 (233.24 f.).

[113] Emerson H. Swift, *Hagia Sophia* (N. Y., 1940), 180 and index *s.v.*; E. M. Antoniades, *Ἔκφρασις τῆς Ἁγίας Σοφίας*, 1 (Athens, 1907), 119 ff.

[114] In addition to the texts cited by E. M. Antoniades, *loc. cit.*, see Cleomedes, *De motu circulari corporum caelestium*, 1, 10, ed. H. Ziegler (Leipzig, 1891), 99.1 ff.; Ptolemy, *περὶ ἀναλήμματος*, *Claudii Ptolemaei opera quae exstant omnia*, 2, *Opera astronomica minora*, ed. J. L. Heiberg (Leipzig, 1907), 187–223; *Scriptores originum Constantinopolitanarum*, ed. T. Preger, 2 vols. (Leipzig, 1901–7), indices, *s.vv. ὡρολόγιον, ὡρολογεῖον*; Cramer, *Anecdota Graeca*, 1, 382.1 ff.; Nicephorus Blemmydes, *Epitome physica*, 28, 5, MPG, 142, 1272B. Cf. J. N. Svoronos, 'La Tholos d'Athènes,' *Numismatische Zeitschrift*, 55 (N.F. 15, 1922), 129 n. 8 and *passim*; A. G. Paspates, *The Great Palace of Constantinople* (London, 1893), 119 and index, *s.v.*; A. A. Vasiliev, 'Harun-ibn-Yahya and his description of Constantinople,' *Seminarium Kondakovianum*, 5 (1932), 160 and n. 59. See also O. Schissel, 'Antike Stundentafeln,' *Hermes*, 71 (1936), 104–17; Wilhelm Kubitschek, *Grundriss d. antiken Zeitrechnung* (*Handb. d. Altertumswiss.*, 1.7 [Munich, 1928]), 174–218; H. Diels, *Antike Technik* (2nd ed., Leipzig-Berlin, 1920), 155–232; and the works of Ernst v. Bassermann-Jordan and Joseph Drecker listed in the bibliography of Ernst Zinner, *Die ältesten Räderuhren u. modernen Sonnenuhren* (Bamberg, 1939).

VII. WINTER SOLSTICE

In beginning his new year with the first new moon after the winter solstice, Pletho was rejecting the Athenian convention [115] of starting with the first new moon after the summer solstice, in order to follow the precept of Plutarch, who had examined the question of the best point of departure for the new year in his *Aetia Romana.* In this discussion (under the heading *Διὰ τί τὸν Ἰανουάριον μῆνα νέου ἔτους ἀρχὴν λαμβάνουσι;*) Plutarch decides in favor of commencing the new year after the winter solstice, in conformance with the precedent set by Numa. The reasons for his decision are set forth in a passage which had special importance for Pletho because it combines the authority of Numa and Plutarch, two of the persons he names in the *Nomoi* in his list of his principal sources.

> Consider [Plutarch says] whether Numa may not have adopted a beginning of the year which seems to us to be in accord with nature. Speaking generally, to be sure, there is no natural first or last in a cycle; and it is by custom that some adopt one starting point for chronology, and others another. They do best, however, who begin [the year] after the winter solstice, when the sun has ceased to move away and turns about to retrace his course towards us. For this beginning of the year is in a certain way natural to mankind, since it increases the duration of the daylight that we receive, diminishes that of the darkness, and brings closer the lord and ruler of the whole world of flux.[116]

For a Greek relying on the luni-solar calendar, 'after the winter solstice' could mean nothing but the first new moon after the solstice. This is clear not only from the general practice of the ancient Greeks [117] but also from Plutarch's use of *νουμηνία* a few lines previously,[118] which Pletho would

[115] Plato, *Laws*, 6, 767C: *πάσας δὴ τὰς ἀρχάς, ὁπόσαι τε κατ' ἐνιαυτὸν καὶ ὁπόσαι πλείω χρόνον ἄρχουσιν, ἐπειδὰν μέλλῃ νέος ἐνιαυτὸς μετὰ θερινὰς τροπὰς τῷ ἐπιόντι μηνὶ γίγνεσθαι, ταύτης τῆς ἡμέρας τῇ πρόσθεν πάντας χρὴ τοὺς ἄρχοντας συνελθεῖν εἰς ἓν ἱερόν.* . . . It was axiomatic that the month began on the day of the new moon; see nn. 220, 236 f. *infra.*

[116] *Aetia Romana*, 19 (268CD); the translation has been reproduced, with several changes, from F. C. Babbitt's version in the Loeb Library edition of the *Moralia*: *ὅρα δὲ μὴ μᾶλλον ὁ Νομᾶς τῇ φύσει προσήκουσαν ἀρχὴν ἔλαβε τοῦ ἔτους ὡς πρὸς ἡμᾶς. καθόλου μὲν γὰρ οὐδέν ἐστι φύσει τῶν ἐν κύκλῳ περιφερομένων, οὔτ' ἔσχατον, οὔτε πρῶτον, νόμῳ δ' ἄλλην ἄλλοι τοῦ χρόνου λαμβάνουσιν ἀρχήν· ἄριστα δ' οἱ τὴν μετὰ τροπὰς χειμερινὰς λαμβάνοντες, ὁπηνίκα τοῦ πρόσω βαδίζειν πεπαυμένος ὁ ἥλιος ἐπιστρέφει καὶ ἀνακάμπτει πάλιν πρὸς ἡμᾶς· γίγνεται γὰρ ἀνθρώποις τρόπον τινὰ κατὰ φύσιν, τὸν μὲν τοῦ φωτὸς αὔξουσα χρόνον ἡμῖν, μειοῦσα δὲ τὸν τοῦ σκότους, ἐγγυτέρω δὲ ποιοῦσα τὸν κύριον καὶ ἡγεμόνα τῆς ῥευστῆς οὐσίας ἁπάσης.* Cf. J. Lydus, *De mensibus*, 1, 17 (10.14 ff.): *ἀρχὴν δὲ ἐνιαυτοῦ ὁ Νουμᾶς ἄγειν ἐθέσπισε Ῥωμαίοις, ὅταν Ἥλιος τὸν Αἰγόκερων μεσάζων* [Αἰγόκερως (Capricorn) is the sign the sun enters at the winter solstice] *αὔξει τὴν ἡμέραν, ἀποστρέφων πρὸς ἡμᾶς ἀπὸ τοῦ νοτίου καμπτῆρος.* . . . (Numa ordained that the Romans should reckon the year as beginning when the sun, in the middle of Capricorn, increases the [length of] the day, and turns back towards us from the southern limits of its course. . . .). I retain the spelling of Numa adopted by the editors of the texts cited.

[117] See nn. 236 f. *infra.* On the beginning of the year in general, see Nilsson, *Entstehung*, 49.

[118] *Loc. cit.* (268B): . . . *καὶ γενέσθαι τὸν Ἰανουάριον πρῶτον, ὅτι τῇ νουμηνίᾳ τούτου τοῦ*

have interpreted in lunar terms. An interesting commentary on Pletho's use of this section of the *Aetia Romana* is to be found in the *De mensibus* of Theodore of Gaza, who applauds Pletho's choice of a new year date and justifies it by summarizing this very same passage from Plutarch.[119]

Unfortunately, Pletho's devotion to the classics was responsible, in this instance, for a certain ambiguity of language (n. 23 *supra*), which might give the impression, as the words of Plutarch perhaps suggest,[120] that the cold weather of winter was caused, in Pletho's opinion, by the sun's being farther away from the earth at this season than at any other time of the year. The same ambiguous terminology, which is to be found also among the Stoics and in the *Eisagoge* of Geminus,[121] had some medieval currency, as the statements of Alexander Aphrodisiensis, Julian, John Lydus, Suidas,[122] Eustathius, and Theodore of Gaza show.[123] Nevertheless, Pletho had access to more precise authorities. The reason for cold weather is accurately described in the first book of the *Apotelesmatica* of Claudius Ptolemy. And the same author's *Mathematike Syntaxis*, together with the commentaries thereon of Theon of Alexandria and Proclus, and such works as the περὶ χρείας τῶν οὐρανίων σωμάτων (*De utilitate corporum caelestium*) of Symeon Seth (*ca.* 1057–59), and the Σύνταγμα τῶν τεσσάρων μαθημάτων (*Quadrivium*) of George Pachymeres (d. 1310) correctly state that the sun is farthest away from the earth (i.e., at apogee) near the time of the summer solstice.[124]

Attention should be drawn, however, to the fact that the authors who

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μηνός, ἣν ἡμέραν καλάνδας Ἰανουαρίας καλοῦσιν, οἱ πρῶτοι κατεστάθησαν ὕπατοι, τῶν βασιλέων ἐκπεσόντων. Cf. also Plutarch's definition of the month as beginning on the day of the new moon in *Solon*, 25, 3, and *passim*; see n. 220 *infra*. In *Romulus*, 11, 2, Plutarch says, νῦν μὲν οὖν οὐδὲν αἱ Ῥωμαϊκαὶ νουμηνίαι πρὸς τὰς Ἑλληνικὰς ὁμολογούμενον ἔχουσιν, but the context indicates that he has reference not merely to νουμηνία as such, but to the system of reckoning in general.

[119] MPG, 19, 1200D: καὶ εὖ τήνδε [*sc.* ἀρχὴν τοῦ ἐνιαυτοῦ] ἐπαινεῖ Πλήθων. νόμῳ γὰρ ἄλλων ἄλλην τοῦ ἔτους ἀγόντων ἀρχήν, φύσει πως ἔοικεν αὕτη οὖσα ἀρχή· ἡνίκα δὴ ἥλιος, ὁ τῆς γενέσεως κύριος, τοῦ πρόσω ἰέναι λήγων ἀνακάμπτειν ἄρχεται ὡς ἡμᾶς, καὶ τὸν μὲν τοῦ φωτὸς αὔξει χρόνον, τὸν δὲ τοῦ σκότους μειοῖ. ὀρθῶς οὖν καὶ Νουμᾶς ἀρχὴν τοιαύτην Ῥωμαίοις τέταχε. . . .

[120] Cf. pseudo-Plutarch, *De placitis philosophorum*, 4, 1 (898A) = Diels, *Doxographi Graeci*, 385.18–23 (cf. Herodotus, 2, 24 f.).

[121] Diogenes Laertius, *Vitae philosophorum*, 7, 151 f.; Geminus, *Eisagoge*, 1, 12 (6.21–8.2).

[122] Alexander, *In Aristotelis Meteorologicorum libros commentarium*, ed. Michael Hayduck (Berlin, 1899), 59.21–8, 97.24 ff.; Julian: see text quoted at n. 144 *infra*; J. Lydus (n. 116 *supra*). Suidas, *Lexicon*, *s.v.* ἔαρ (2, 188.16 f.), gives the converse of this proposition, stating that the sun is closer to us in spring.

[123] See text in n. 119 *supra*; Eustathius, *Opuscula*, 316.7–10.

[124] *Apotelesmatica*, 1, 10, ed. F. Boll and A. Boer, *Claudii Ptolemaei opera quae exstant omnia*, 3.1 (Leipzig, 1940), 30.15–17. Ptolemy's explanation is repeated by one of the anonymous commentators on the *Phaenomena* of Aratus, ed. E. Maass, 130.32–131.1 = MPG, 19, 1149B; *Mathematike Syntaxis*, 3, 4 (1, 233.8 f.); Karl Manitius, *Des Claudius Ptolemäus Handbuch der Astronomie*, 1 (Leipzig, 1912), 167.1 ff., 428 n. 23; Theon, *op. cit.*, 3, 879.6–14 and n. 5; Proclus, *Hypotyposis astronomicarum positionum*, 3, 64 f. and 7, 28 f., ed.

write of the sun's being 'farthest from *us*' in the winter, and 'closest to *us*' in the summer never actually say that the sun is farthest away from the *earth* (or at apogee) in winter, and closest to the *earth* (or at perigee) in summer. What they apparently meant was that in northern latitudes in winter the sun appears in the sky south of the zenith and that by summer it has come 'back to us,' i.e., has moved northward over the celestial equator, so that it stands closer to the zenith (the proximity to the zenith varying with the latitude of the observer). This point of view is well illustrated by Psellus, who remarks in his Διδασκαλία παντοδαπή (*De omnifaria doctrina*) that when the sun moves north of the celestial equator and stands overhead (in northern latitudes) it produces summer, and that when it moves southward it produces winter (*ἰστέον ὡς ὅταν μὲν ὁ ἥλιος βόρειος ἡμῖν γένηται, καὶ ὑπὲρ κεφαλῆς κινοῖτο, θέρος ποιεῖ ὅταν δὲ πρὸς νότον ἀπέλθῃ χειμῶνα ἐργάζεται. . . .*).[125] Conversely, as in pseudo-Plutarch, *De placitis philosophorum* (n. 120 *supra*), the sun is stated to be 'nearer' Egypt in the winter [than in the summer, when it is 'closer' to regions farther north]. In other words, these writers seem to say, north of the equator the sun is closer to the zenith, and its rays are more direct, in summer than in winter, the situation being reversed in the southern hemisphere. This is perfectly true. The error would lie in not realizing that the apogee and perigee of the sun coincide approximately with the summer and winter solstices respectively, and in confusing angular distance with linear distance, so as to assume that, when the sun moves farther and farther away from the zenith of the observer in northern latitudes, in its southward course along the ecliptic, appearing lower and lower over the horizon (angular distance), it also moves farther away from the earth in miles.

It is hazardous to dogmatize, but a careful study [125a] of these texts seems to indicate that the writers who use language similar to that of Plutarch and Pletho were undoubtedly guilty, from our point of view, of carelessness of expression, but possibly innocent of the error of supposing that winter is the season during which the sun is farthest from the earth. This hypothesis gains a certain measure of confirmation from the fact that Symeon Seth, who

Manitius, 72.9–19, 226.16–24, 287 n. 6. Cf. Olympiodorus, *In Aristotelis Meteora*, ed. W. Stüve (Berlin, 1900), 176.32 ff.; *Anecdota Graeca*, ed. Cramer, 1, 377.11 ff.

Symeon Seth, ed. A. Delatte, *Anecdota Atheniensia et alia*, 2, *Textes grecs relatifs à l'histoire des sciences* (*Bibliothèque de la Faculté de Philosophie et Lettres de l'Université de Liége*, 88 [1939]), 116.5 ff.; George Pachymeres, edd. P. Tannery and E. Stéphanou, *Studi e Testi*, 94 (Rome, 1940), 379.1–6, 318.3 ff., 23 ff., 397.11 ff.

[125] MPG, 122, 748D–749A.

[125a] See my 'ὑπόγειος, a Byzantine term for perigee, and some Byzantine views of the date of perigee and apogee,' *Orientalia Christiana Periodica*, 13 (1947), 385–403; Symeon Seth, *loc. cit.* (in n. 124), 111.10 ff., 2, 49.6 ff.

was correctly informed on the season of apogee and perigee, as the passage cited in n. 124 *supra* demonstrates, elsewhere in the same treatise explains winter by the sun's remoteness (διὰ τὴν τοῦ ἡλίου ἀπόστασιν) and summer by the sun's proximity (διὰ τὴν ἐγγύτητα). In another work (Σύνοψις τῶν φυσικῶν, *Conspectus rerum naturalium*, which had previously been attributed to Psellus), he says that winter comes because the sun is far from us at that time (διὰ τὸ τηνικαῦτα εἶναι πόρρωθεν ἡμῶν). Obviously, Seth has reference here to the sun's angular distance from the zenith, and not to its linear distance from the earth. The example of Symeon Seth, though not unique, may be insufficient to support a generalization concerning all of the texts cited in nn. 116–123 *supra*, but it should at least serve as a warning that it would be unjust to condemn Pletho and the others who resort to the same terminology without more incriminating evidence.

The juxtaposition of the prescription to begin the year after the winter solstice and the description of the position of the sun at that time, plus citation of both Numa and Plutarch in the *Nomoi*, would seem to indicate that Pletho's new year date was derived from the passage from Plutarch translated *supra*. But by accepting Plutarch's counsel in this matter, Pletho was by no means turning his back upon the pagan Greek tradition. Ptolemy knew of Greeks who used the winter solstice as the *terminus a quo* for the new year, and in expounding the reasons for the choice of either of the solstices or of the equinoxes for this purpose remarks that some preferred the winter solstice because it is at this juncture that the day first begins to increase in length.[126] More sweeping is the generalization of John Lydus in the third book of the *De mensibus* that

> . . . the Greeks reckoned the beginning of the year from December 25, the [winter] solstice, while the Romans started eight days later with the first of January; for the Greeks keep watch for the solstice, and the Romans wait until the shadow cast by the gnomon begins to contract, the reduction in the [length of the] shadow being imperceptible for eight days.[127]

By Greeks here we are, I think, to understand 'pagans,' in this instance presumably heathen Greeks of late antiquity who venerated this day as the

[126] *Apotelesmatica*, 2, 11, 4, edd. Boll et Boer, 94.9–11: περὶ τῆς τοῦ ἔτους νεομηνίας: . . . τὸ δὲ χειμερινὸν τροπικὸν διὰ τὸ πρώτως ἄρχεσθαι τότε τὸ μέγεθος τῆς ἡμέρας ἀπὸ μειώσεως αὔξησιν λαμβάνειν.

[127] 3, 17 (57.24–58.2): ὅτι Ἕλληνες μὲν ἀπὸ τῆς κε' Δεκεμβρίου τὴν ἀρχὴν ἐποιοῦντο τοῦ ἔτους ἤτοι τὴν τροπήν, Ῥωμαῖοι δὲ μετὰ ὀκτὼ ἡμέρας κατὰ τὴν πρώτην Ἰανουαρίου· οἱ μὲν Ἕλληνες τὴν τροπὴν αὐτὴν τηροῦντες, οἱ δὲ Ῥωμαῖοι τὴν τοῦ γνώμονος σκιὰν πότε συστέλλεσθαι ἄρξεται· μέχρι γὰρ τῶν ὀκτὼ ἀνεπαίσθητός ἐστιν ἡ τῆς σκιᾶς μείωσις. So far as I know, this text has not been cited or discussed in the literature (n. 132 *infra*) on the *Natalis Solis Invicti*. Note also *ibid.*, 149.19–150.10, 162.3 f. (cf. 61.1 ff., 159.2 f., 174.5 ff., 21 f.), where Αὐξιφωτία (Αὐξιφώτια) is equated with the month of January.

birthday of the sun (on which see *infra*). For this type of chronology did not apply without exception to all of ancient Greece, as Lydus himself was well aware,[128] although it was once argued, on other grounds, that the month corresponding to our December/January had originally been the first month of the Greek year. This theory has been abandoned,[129] but Pletho could have appealed to the example of a number of Greek city-states which, unlike the Athenians, began their new year on the day of the first new moon after the winter solstice. These were Delos, Elis, and Tauromenium, as well as, some would add, Lamia and Boeotia.[130] Our knowledge of the new year date of these localities rests on epigraphic evidence, which we cannot assume that Pletho knew. He could, however, have pointed to the statement of Plutarch in his life of Pelopidas that the Boeotian new year began around the time of the winter solstice,[131] and to the statements of Ptolemy and John Lydus quoted *supra*.

It may have been of some relevance also to Pletho that the winter solstice, to which he had assigned so prominent a place in his chronological system, was close to (or, in some calendars, identical with) the festival of the *Natalicia Solis*, held on December 25 (a day designated in the pagan calendar by the rubric, ἡλίου γενέθλιον· αὔξει φῶς), the heathen celebration

[128] *Ibid.*, 3, 22 (60.15–17), where he says: Ἕλληνες δὲ τὴν πρώτην τοῦ καρκίνου μοῖραν, ὡς ἄν τις εἴποι, τὴν εἰκάδα τρίτην τοῦ Ἰουνίου μηνός, εἰς ἀρχὴν ἔτους παρέδοσαν, and has reference to the Athenian year, which of course began on the first new moon after the summer solstice, and not always on June 23. It is important to note that the ancient sources rarely specify that the new year began on the day of the new moon after the solstice; they usually content themselves, as here, with some abbreviated statement which must be understood in lunar terms: Diodorus Siculus, *Bibliotheca historica*, 12, 36, 2; Ptolemy, *Mathematike Syntaxis*, 3, 1 (1, 205.15 ff.). For the lunar elements of the Greek month, see nn. 178–85 *infra*. On the new year date, cf. n. 160 *infra*.

On Ἕλληνες as 'pagans,' see Julius Jüthner, *Hellenen u. Barbaren* (*Das Erbe d. Alten*, 8 [Leipzig, 1923]), index, *s.v.* Ἕλληνες, etc. In another passage, *De mensibus*, 3, 22 (60.1–3), Lydus uses Ἕλληνες to designate non-Attic Greeks (Macedonians); but usually he applies this term to the Greeks in general.

[129] Nilsson, *Entstehung*, 49 f.; Ernst Bischoff, PW, 7 (1912), 692.7 ff.; Ginzel, *Handbuch*, 2, 347 ff., 380; Schmidt-Rühl, *Handbuch*, 387–403.

[130] The evidence, predominantly inscriptional, is summarized by Ernst Bischoff, 'De fastis Graecorum antiquioribus,' *Leipziger Studien zur classischen Philologie*, 7 (1884), 313 ff. = I; *idem*, *s.v. Kalender*, PW, 10 (1919), 1568 ff. = II. Delos (I, 390, 392; II, 1569.58 ff., 1583 [56], 1591 [56]), Tauromenium (I, 372–4; II, 1569.58 ff., 1593.37), Lamia (I, 340; II, 1576 [4], 1589 [4]), Boeotia (I, 343 ff.; II, 1576 [7], 1589 [7]).

M. P. Nilsson, *Studia de Dionysiis Atticis* (Lund, 1900), 6–14, and *Entstehung*, 49, shows that Boukatios, the first month of the Boeotian new year, preceded the winter solstice in ancient times, although it came after the solstice in Plutarch's day.

Bischoff says the Elean new year fell around the winter solstice (I, 347–9; II, 1569.58 ff.), but he also says it came on the new moon following the summer solstice (II, 1577.17 ff.). Dinsmoor, 'Archaeology and astronomy' (see n. 42 *supra*), 141 f., 171–3, proves that the Elean year began *after* the winter solstice.

[131] 24, 1.

of which determined the date of the Christian observance of Christmas.[132] This would accord well with Pletho's own heliolatric interests, as evidenced by his hymns to the sun, which George of Trebizond praises for their elegance and charm:

> Vidi, uidi ego, uidi et legi preces in solem eius [*sc.* Plethonis], quibus, sicut creatorem totius, hymnis extollit atque adorat, tanta uerborum elegantia compositionis, suauitate numeri, sonoritate schematum, rebus accommodata, dignitate distincta, ut nihil addi posse uideatur, sententiis autem ita caute diuinos solis honores efferentem, ut ne doctissimi quidem, ⟨nisi⟩ attentius saepiusque perlegerint, animaduertere possint.[133]

The reference in the last sentence to a conscious attempt on the part of Pletho to conceal the fact that he was paying divine honors to the sun is somewhat obscure. There may have been some cryptoheliolatric verses from Pletho's hand which are either lost or unpublished. But it is probable that George of Trebizond should not be taken literally, and that he was thinking of the hymn to the sun which Pletho borrowed from Proclus and reëdited with a few changes,[134] or even of Pletho's ninth hymn, *ἐς θεοὺς οὐρανίους*, which begins

> *ὦ τοῦδ' οὐρανοῦ ἄναξ Ἥλιε, ἵλαος εἴης,*
> *ἵλεως καὶ σύ, Σελήνη, εἴης πότνια ἰρή.*[135]

At any rate, these are the two lines quoted in a scholium on the Emperor Julian's prose hymn *εἰς τὸν βασιλέα Ἥλιον* in *Codex Ottobonianus Graecus 181* by Demetrius Rhalles,[136] although in a note in *Monacensis Graecus 237*

[132] Ed. Franz Boll, *Das Kalendarium des Antiochus* [*ca.* 200], *SB, Heidelberg, Philosoph.-hist. Kl.*, 1910, 16. *Abh.* 16, 39 ff. Cf. Cosmas of Jerusalem, *Ad Carmina S. Gregorii*, MPG, 38, 464: *ἡ παρθένος ἔτεκεν, αὔξει φῶς*. Epiphanius, *Panarion*, 2, 51, 22, 3–11, ed. Holl, 2 (Leipzig, 1922), 284.4–287.3.

The texts and literature on the pagan festival and its relation to Christmas have been collected and discussed by: H. Usener, *Das Weihnachtsfest* (2d. ed., Bonn, 1911); Hugo Rahner, 'Das christliche Mysterium von Sonne u. Mond,' *Eranos-Jahrbuch*, 10 (Zürich, 1943), 352–95; Anselm Strittmatter, 'Christmas and Epiphany,' *Thought*, 17 (1942), 600–26; F. J. Dölger, '*Natalis Solis Invicti* u. das christliche Weihnachtsfest,' *Antike u. Christentum*, 6 (Münster in W., 1940), 23–30; P. H. Frank, BZ, 39 (1939), 451 f.; M. P. Nilsson, 'Sonnenkalender u. Sonnenreligion,' ARW, 30 (1933), 141–73; *idem*, 'Studien zur Vorgeschichte des Weihnachtsfestes,' ARW, 19 (1916–19), 50–150; A. Hollard, 'Les origines de la fête de Noël,' *Rev. d'hist. et de phil. religeuses*, 11 (1931), 256–74; Franz Cumont, *Les religions orientales dans le paganisme romain* (4th ed., Paris, 1929), ix, 206 n. 3. I have not seen O. Cullmann, *Weihnachten in d. alten Kirche* (Basel, 1947).

[133] *Comparationes phylosophorum Aristotelis et Platonis*, ed. Augustinus Clarauallis (Venice, 1523), penultimate chapter, whose text I reproduce here and at n. 438 *infra*, except for a few changes in capitalization and punctuation, the addition of *nisi*, and the emendation of *distinctam* to *distincta* and of *muneri* to *numeri*. I take *efferentem* to be the error of the author himself.

[134] Alexandre, lxxvi n. 2.

[135] Alexandre, 210.

[136] Joseph Bidez, *La tradition manuscrite et les éditions des discours de l'Empereur Julien*

the same scribe mentions a larger work by Pletho dealing solely with the sun.[137] At one point (f. 99) in his annotation of Julian's hymn in *Ottobonianus 181*, Rhalles, who is a personage of considerable interest to students of Pletho since it was he who collected and preserved the extant fragments of the *Nomoi*,[138] reproaches Pletho for having neglected a certain passage in the hymn.[139] Rhalles's orthography is fantastic, and he was the kind of man who at the age of 74 could avow, in imitation of Julian, that the older he grew the greater was his love for the sun (*καὶ νῦν ὄντα με ο′ καὶ δ′ ἐτῶν καὶ ἀεὶ αὖξι ὁ πόθος*).[140] Nevertheless, there can be no doubt that his scholium on f. 99 (*ὦ πλήθων ἀγαθέ, ταύτην τὴν ἐξήγισην τοῦ παρόντος λόγου παρέληπες, ἀξίαν καὶ ὀφέλημον οὖσαν, σοῦ ἀναλόγου καὶ ἀξίου ὄντος, καὶ μᾶλλον περὶ τῶν μαθειματικῶν*) means to censure Pletho for having failed to exploit this particular portion of the text (*ταύτην τὴν ἐξήγισην τοῦ παρόντος λόγου*), which Rhalles deemed useful and valuable.

It is not clear, however, whether we are to infer that Pletho did not know Julian at all, or merely that he had read Julian's Hymn to the Sun but had not, in Rhalles's judgment, put it to good use. The latter inference would seem to be the more reasonable both because of the kinship that Pletho, whom George Scholarius places in the same category as Julian,[141] might be expected *a priori* to have felt for the apostate emperor, and because references to Julian by Pletho in a letter to Bessarion demonstrate that Pletho had some acquaintance with Julian's works.[142] It may be of interest in this connection that Julian's Hymn to the Sun appears in a number of manuscripts alongside works from the hand of Pletho.[143]

Whatever use Pletho may have made of it, Julian's Hymn to the Sun links the beginning of the new year with the worship of the sun, and explains the selection of the new year date which begins after the winter solstice as an act of homage to Helios.

(*Université de Gand, Recueil de travaux publiés par la Faculté de Philosophie et Lettres*, fasc. 61 [1929]), 70, 76 ff.

[137] *Ibid.*, 79; this statement apparently rests upon Bidez's own study of *Monacensis Graecus 237*; no such scholium is given by I. Hardt in his *Catalogus codicum manuscriptorum*, 3 (Munich, 1806), 7 ff.

[138] Bidez, *loc. cit.*, 76; Alexandre, 2 n. 1, 136 n. 4; I. Hardt, *loc. cit.*, 9, 329 f. Cf. Nikos A. Bees, 'Demetrios Rallis Kabakis u. d. Marcianus IX 21,' BNJ, 15 (1938), 137–40.

[139] Bidez, *loc. cit.*, 77, on *Oration* 4, 150CD, ed. W. C. Wright, *The works of the Emperor Julian*, 1 (London, 1930), 412. In my quotations *infra*, I have preserved Rhalles' spelling without change.

[140] Bidez, *loc. cit.*, 78.

[141] Edd. Petit, etc., 4, 152.37.

[142] MPG, 161, 717B, 719C; cf. Bidez, *loc. cit.*, 78 f., who maintains that Julian had no influence on Pletho's theology.

[143] Bidez, *loc. cit.*, 68 ff.; cf. 5.

If [writes Julian] . . . I should say that we also worship Mithra, and celebrate games in honor of Helios every four years, I shall be speaking of customs that are somewhat recent. But perhaps it is better to cite a proof from the remote past. The beginning of the cycle of the year is placed at different times by different peoples . . . But our forefathers, from the time of the most divine king Numa, paid still greater reverence to the god Helios . . . They saw that he is the cause of all that is useful, and so they ordered the observance of the New Year to correspond with the present season; that is to say, when King Helios returns to us again, and, leaving the region farthest south . . . , advances from the south to the north to give us our share of the blessings of the year. And that our fathers . . . thus established the beginning of the year (*τὴν ἐπέτειον νουμηνίαν*) because they understood this well, can be perceived from the following . . .

Before the beginning of the year (*πρὸ τῆς νουμηνίας*), at the end of the month named after Kronos [= December], we celebrate most splendid games in honor of Helios and dedicate the festival to the Invincible Sun (*Ἡλίῳ ἀνικήτῳ*).[144]

Julian, who, like Pletho, seems to be dependent upon Plutarch here, also repeats Plutarch's statement on the situation of the sun at the time of the winter solstice. Unlike Pletho, however, Julian was satisfied to keep the solar calendar of the Romans [145] and did not attempt to revive the luni-solar calendar of the ancient Greeks.

VIII. POSITION OF THE INTERCALARY MONTH

Once Pletho had determined to begin the new year at the first new moon after the winter solstice, it was natural that he should provide for intercalation at this point whenever a year of 12 lunar months failed to reach the solstice. This he may well have done on empirical grounds or merely for the sake of convenience. But it may be that like his critic, Theodore of Gaza, he believed there was a tradition that the Athenians added their embolismic month at the end of the year. Theodore arrived at this conclusion [146] on the basis of two texts: one from the *Saturnalia* of Macrobius, which states that the intercalary month was added at the end of the last month, and the other from Herodotus, quoted *supra*,[147] on the Greek practice of intercalating a month every three years in order to preserve the balance between the lunar and solar years. In making use of the *Saturnalia*, however, he failed to notice that Macrobius had misunderstood the Athenian luni-solar calendar so grossly as to describe it as providing for the intercalation of a block of three whole months every eighth year.[148] What apparently struck him was Macro-

[144] Wright, *loc. cit.*, 424–428 (155B–156C); cf. T. Nissen, 'Eine christliche Polemik gegen Julians Rede auf den König Helios,' BZ, 40 (1940), 15–22.

[145] Wright, *loc. cit.*, 424 (155AB).

[146] MPG, 19, 1212AB; cf. *ibid.*, 1188C, 1197C.

[147] In n. 51.

[148] I, 13, 9 f., ed. F. Eyssenhardt (Leipzig, 1893), 67.7–22: nam et Graeci cum animaduer-

bius's appeal to the *De sacris Atheniensium* of a certain unidentifiable Glaucippus, according to whom the Greeks added their intercalary days at the end of the last month of the year. In the words of Macrobius:

omni autem intercalationi mensis Februarius deputatus est [*sc.* by the Romans], quoniam is ultimus anni erat, quod etiam ipsum de Graecorum imitatione faciebant. nam et illi [*sc.* the Greeks] ultimo anni sui mensi superfluos interserebant dies, ut refert Glaucippus, qui de sacris Atheniensium scripsit. uerum una re a Graecis differebant, nam illi confecto ultimo mense, Romani non confecto Februario sed post uicesimum et tertium eius diem intercalabant, terminalibus iam peractis.[149]

Whether or not Pletho knew any tradition connected with Macrobius, he nevertheless had good ancient precedent for intercalating at the time of the winter solstice. It is possible, perhaps, that he was consciously following the example of the ancient Athenians, or the Delphians, whose regular, though not invariable, custom it was to add their intercalary month at the season of the winter solstice.[150] The Athenian embolismic month in intercalary years came immediately after Poseideon and was known as Ποσειδεὼν δεύτερος (or ὕστερος, or simply β′),[151] as Pletho could have learned from

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terent temere se trecentis quinquaginta quattuor diebus ordinasse annum – quoniam appareret de solis cursu, qui trecentis sexaginta quinque diebus et quadrante zodiacum conficit, deesse anno suo undecim dies et quadrantem – intercalares stata ratione commenti sunt, ita ut octauo quoque anno nonaginta dies, ex quibus tres menses tricenum dierum composuerunt, intercalarent. id Graeci fecerunt, quoniam erat operosum atque difficile, omnibus annis undecim dies et quadrantem intercalare. itaque maluerunt hunc numerum octies multiplicare, et nonaginta dies, qui nascuntur, si quadrans cum diebus undecim octies componatur, inserere in tres menses, ut diximus, distribuendos. hos dies ὑπερβαίνοντας, menses uero ἐμβολίμους appellitabant. This error, which is repeated from Macrobius by Bede, *De temporum ratione*, 12, ed. Jones, *op. cit.*, 208.69–80, seems to have originated with Solinus, *Collectanea rerum memorabilium*, 1, 42, ed. T. Mommsen (Berlin, 1895), 10.19 ff., according to whom: Graeci ergo singulis annis undecim dies et quadrantem detrahebant, eosque octies multiplicatos in annum nonum reservabant, ut contractus nonagenarius numerus in tres menses per tricenos dies scinderetur: qui anno nono restituti efficiebant dies quadringentos quadraginta quattuor, quos embolismos vel hyperballontas nominabant.

[149] *Loc. cit.*, 1, 13, 14 f. (68.10–18). Cf. Schmidt-Rühl, *Handbuch*, 178 ff.; Ginzel, *Handbuch*, 2, 230–32, 241 ff.; Dinsmoor, *Archons of Athens*, 310 f., 387; L. Jahn, ed., *Macrobii . . . opera quae supersunt*, 2 (Quedlinburgi et Lipsiae, 1852), 111 n. 9, 112. Theodore calls for an intercalary month of 30 days, but does not comment on the fact that the Roman intercalation described by Macrobius consisted of 22 and 23 days, added every second and fourth year, respectively, in a four year cycle, plus 5 days taken from the end of February, which in intercalary years had only 23 days. Some of the modern commentators mistook this passage in the *Saturnalia* as a reference to the intercalary *day*. On February as the last month of the Roman year, see Ginzel, *loc. cit.*, 227 ff., and the following n.

[150] Kubitschek, *Grundriss*, 148 f.; Nilsson, *Entstehung*, 47, 49 f.; Bischoff, PW, 10 (1919), 1570.1 ff., 1583.2 ff., 1589(10), 1591(54); and *idem*, *Leipziger Studien zur classischen Philologie*, 7 (1884), 351 ff., 390. Cf. Plutarch, *Numa*, 18 f., and *Aetia Romana*, 19, on the intercalary month of 22 days added by Numa at the end of February, which up until Numa's day had, according to some authorities, been the twelfth and last month of the year.

[151] Dinsmoor, *Archons of Athens*, index D, *s.v.* Intercalary months; Schmidt-Rühl, *Hand-*

Ptolemy's *Mathematike Syntaxis*, which mentions a Ποσειδεὼν ὁ πρότερος,[152] even if he had had no acquaintance with the numerous inscriptions that could be cited on this point.[153]

The month of Poseideon corresponded roughly to the Julian (or Gregorian) December/January, so that the winter solstice always fell in either Poseideon α′ or Poseideon β′. That Poseideon and the winter solstice were closely connected was well recognized in both ancient and medieval times. This is clear from Aristotle's *Historia animalium*,[154] from which Pletho made a number of excerpts extant in *Venetus Graecus 406*,[155] from the statement of Plutarch in his *Julius Caesar* that Poseideon was the month of the winter solstice and the equivalent of the beginning of January,[156] from Eustathius's commentary on the *Iliad*,[157] and from the *De mensibus* of Theodore of Gaza, who cites the very passages from Aristotle which Pletho could have used to attain the same result.[158]

IX. MONTHS

Pletho apparently did not attempt to revive the ancient names of the Greek months, though hardly because he was unwilling, as Theodore of Gaza maintains, to do the necessary research.[159] Theodore himself, who had very much the same kind of resources for study and investigation that were available to Pletho, tried his hand at compiling such a list. But his reconstruction, which begins auspiciously with Hecatombaeon designated correctly as the first of the Attic months and, somewhat less accurately, as the month of the summer solstice, is unsuccessful because of his inability to arrange the months in their proper order.[160] Theodore did not fail for lack

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buch, 143, 284–7; August Mommsen, *Chronologie, Untersuchungen über das Kalenderwesen d. Griechen, insonderheit d. Athener* (Leipzig, 1883), 140, 148.

[152] 4, 11 (1, 342.21), which Halma, *Composition mathématique de Claude Ptolémée*, 1 (Paris, 1813), 278, incorrectly translates 'le premier jour du mois Posidéon.'

[153] Dinsmoor, *loc. cit.*

[154] 5, 9, 543a.10 f.; 5, 11, 543b.9–16; cf. 7, 17, 570a.31–570b.1 (on Poseideon). Cf. *idem*, *Meteorologica*, 1, 6, 343b.6 f. (Gamelion [the month that follows Poseideon] said to be close to the winter solstice). August Mommsen, *Griechische Jahreszeiten* (Schleswig, 1875), 1, merely states the season of Poseideon without citation of texts.

[155] Morelli, *Bibliotheca manuscripta*, 270.

[156] 37, 2: χειμῶνος ἐν τροπαῖς ὄντος, ἱσταμένου Ἰανουαρίου μηνὸς (οὗτος δ' ἂν εἴη Ποσειδεὼν Ἀθηναίοις).

[157] On *Iliad*, 15, 190 ff.: *Commentarii ad Homeri Iliadem*, 3 (Leipzig, 1829), 260.39 ff. (1011.65 ff.): διὸ καὶ οἱ Ἀττικοὶ τὸν περὶ χειμερίους τροπὰς μῆνα Ποσειδεῶνα καλοῦσιν, ὡς Ἀνακρέων· μεὶς μὲν δὴ Ποσειδηίων ἔστηκε, νεφέλαι δ' ὕδατι βαρύνονται, ἄγριοι δὲ χειμῶνες παταγοῦσι. καὶ τοιοῦτος μὲν καὶ ὁ Ποσειδῶν.

[158] MPG, 19, 1169D–1172D.

[159] *Ibid.*, 1168B, 1213BC.

[160] *Ibid.*, 1177BC, 1184AB. Strictly speaking, Hecatombaeon is not the month of the

of pains. On the contrary, he seems to have sought out and found most of the best literary evidence on this problem, having consulted Aristotle, Theophrastus, Thucydides, Aeschines, Demosthenes, Simplicius, Plutarch, Kekos (= Tzetzes), Proclus, Hesiod, Suidas, Galen, Philostratus, Pliny, Dionysius of Halicarnassus, Numa Pompilius, Solon, and Herodotus, in that order.[161] But not even this impressive array of witnesses, which includes all but a very few of the best literary texts on the names of the Athenian months known to modern scholarship, could save Theodore from error.

The truth is that even today an accurate list of the Athenian months and their Julian (or Gregorian) equivalents cannot be reconstructed from the literary sources alone. Geminus does not tabulate the ancient names of the month, nor does Ptolemy, who uses the Egyptian and Julian names with only occasional scattered cross references to the Athenian. A great number of Athenian and non-Athenian months appear in Plutarch, whom Theodore cites on a number of points, but there is no systematic presentation or tabulation, and the information that is provided is quite inadequate for a general comprehension of the subject.[162] Somewhat more helpful is the *De mensibus* of John Lydus, which, however, though sound in the sequence of the months, erroneously puts Elaphebolion at the beginning of the year instead of Hecatombaeon, and makes no attempt to show the relation of these months to the calendar of his own day.[163] None of the lexicographers gives all the necessary data,[164] nor does Johannes Tzetzes, whose list of the twelve Attic months in his commentary on the *Work and Days* of Hesiod contains a number of errors.[165]

The confusion introduced by Tzetzes was aggravated in the fourteenth

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solstice, as Theodore says it is: θερινὸς ὢν τροπικός (*ibid.*, 1177C), but the month *after* the solstice (Plato, *Laws*, 6, 767C, quoted in n. 115 *supra*). In actual practice, however, Dinsmoor shows (*Archons of Athens*, 419 ff.; *Athenian archon list in the light of recent discoveries*, 248–50), the new year might begin as early as 18 days before the solstice, or as late as 46 days thereafter. But these departures were exceptional, and the great majority of new year dates came within a month after the solstice. The ancient Athenian months, as we now know them, were: Ἑκατομβαιών (July/August), Μεταγειτνιών (August/September), Βοηδρομιών (September/October), Πυανεψιών (October/November), Μαιμακτηριών (November/December), Ποσειδεών (December/January), Γαμηλιών (January/February), Ἀνθεστηριών (February/March), Ἐλαφηβολιών (March/April), Μουνυχιών (April/May), Θαργηλιών (May/June), Σκιροφοριών (June/July).

[161] *Ibid.*, MPG, 19, 1169B–1185D.

[162] I draw this conclusion after checking the passages listed by Daniel Wyttenbach, *Plutarchi Chaeronensis Moralia*, 8 (Oxford, 1830), *Index Graecitatis*, *s.vv.*

[163] 3, 22 (59.21 ff.).

[164] This statement is based upon an examination of the Greek lexica and etymologica mentioned by Ada Adler in her edition of Suidas and by W. C. Greene in his edition of the *Scholia Platonica*, xxix.

[165] On v. 502 (309.13–16).

century by the historian, George Pachymeres, who took Tzetzes as his model and equated the first month, Hecatombaeon (properly July/August), with the Roman month of January.[166] The Hellenistic calendar frieze which was installed sometime during the Middle Ages in the Athenian Church of Hagios Eleutherios, a structure dated at the end of the eighth century, originally included all twelve of the Attic months. But in its present, and presumably medieval, form, it would have been of little value, both because the months are not actually named in the frieze and because the first of the months represented has been identified by Svoronos as the fall month of Pyanepsion.[167] As late as 1825, Ideler had to support his list by argument and reference to the epigraphic evidence.[168] The literary and archaeological materials can be supplemented by the *Menologia*, in this case tables of the names of the ancient months, in no way to be confused with the liturgical *Menologia* of the Byzantine Church. But only very rarely, as for example in a *Latin* manuscript of the eighth century (Rome, Biblioteca Valicelliana, E 26), are the Athenian months listed with their correct Julian counterparts,[168a] although even this document neglects to indicate that Hecatombaeon was the first month of the Attic year. How many of these *Menologia* there were, it is difficult to say, but obviously they did not have a wide circulation.

Even if Pletho had possessed this information in satisfactory form, however, he might have preferred to use numerical designations for the months. By doing so he was able to avoid the narrow secularism of taking over the names peculiar either to Athens, which in the medieval period had lost its ancient hegemony over Greece, or to any of the other ancient city-states.

[166] Ed. I. Bekker, 1 (Bonn, 1835), 96.15, 237.5, 286.19, 305.2, 318.17, 394.19, 395.2, 403.7, 9, 532.1, 8, 689–693; 2, 146.1, 249.11, 306.3, 382.19, 699 ff., and *passim*. Cf. V. Gardthausen, *Griechische Palaeographie*, 2 (2d ed., Leipzig, 1913), 475 f.; P. Tannery, 'Les noms de mois attiques chez les Byzantins,' *Revue Archéologique*, 3eS., 9 (1887), 23–36, reprinted in Paul Tannery, *Mémoires scientifiques*, ed. J. L. Heiberg, 4 (Paris-Toulouse, 1920), 223–39; L. Voltz, 'Bemerkungen zu byzantinischen Monatslisten,' BZ, 4 (1895), 547–58.

[167] J. N. Svoronos, 'Εἰκονογεγραμμένον 'Αττικὸν λαϊκὸν ἡμερολόγιον,' 'Ημερολόγιον τῆς Μεγάλης 'Ελλάδος (Athens, 1923), 34–48; *idem*, 'Der athenische Volkskalender,' *Journal international d'archéologie numismatique*, 2 (1899), 21–78; cf. Doro Levi, 'The allegories of the months in classical art,' *Art Bulletin*, 23 (1941), 276 f.; Ludwig Deubner, *Attische Feste* (Berlin, 1932), 248–54.

[168] Ludwig Ideler, *Handbuch d. mathematischen u. technischen Chronologie*, 1 (Berlin, 1825), 275 ff.

[168a] Ed. J. F. Mountford, 'De mensium nominibus,' JHS, 43 (1923), 114–16. Cf. K. Hanell, 'Das Menologium des Liber Glossarum,' *Kungl. Humanistika Vetenskapssamfundet i Lund, Årsberättelse* (*Bulletin de la Société Royale des lettres de Lund*), 1931–32, 13–16 (7–10); C. W. Jones, *op. cit.* (in n. 62 *supra*), 346–50. The *Menologion* often cited from H. Stephanus, *Thesaurus Graecae linguae*, appendix, is neither accurate nor complete: it omits the month of Boedromion and erroneously identifies the first Attic month with September.

Indeed, the successors of Alexander the Great had already adopted this expedient in the interests of Greek unity,[169] and Plutarch, whom we know to have been one of Pletho's principal sources, indicates that in his day the months were designated by ordinal numbers:

> Some say the battle took place on the seventh day of the beginning of the month; others put it on the day of the new moon of the month now known as the Fourth Month, but which was formerly called Hermaeus by the Argives.[170]

No names of months occur in Homer, and the reference to the month Lenaeon in the *Works and Days* (v. 504) of Hesiod is probably an interpolation.[171] In later times, numbers were used instead of names in Achaea, Arcadia, Ephesus, Locris, Megaris, Messenia, Phocis,[172] Asia Minor, and Cyprus.[173] This type of reckoning, which is reflected in the Roman names September, October, November, and December,[174] was not unknown in the Middle Ages, as can be seen in a work attributed to John Chrysostom,[175] and in inscriptions from Caria and Pamphylia (sixth century).[176]

X. PLETHO'S MONTH

Pletho's month and the arrangement of weeks within it require a few words of elucidation, for the extant portion of the *Nomoi* that deals with these matters (p. 189 *supra*) is ambiguous. Thus, Pletho says that the first 'week' (ἱσταμένου) of the month extends from the first to the eighth, the second (μεσοῦντος) from the seventh to the second (regressively), the third (φθίνοντος) from διχομηνία to the eighth, and the last (ἀπιόντος) from the seventh to the second (regressively). On this basis alone, it is impossible to work out any kind of orderly and intelligible scheme that would command assent. But, starting from his ἱερομηνίαι (holidays), which fall, as we shall see (pp. 236 ff. *infra*), on the first, eighth, fifteenth, twenty-second, twenty-ninth [and thirtieth] days of each month, we can see that he was making provision for a seven-day week (cf. n. 24 *supra*). It is then obvious that,

[169] Cf. Polybius, 2, 37, 10: Nilsson, *Primitive time-reckoning*, 364, and *idem*, *Entstehung*, 51 f.; cf. n. 172 *infra*.

[170] *De mulierum virtutibus*, 4 (245E).

[171] Nilsson, *Entstehung*, 28.

[172] Bischoff, *Leipziger Studien zur classischen Philologie*, 7 (1884), 405, 412 ff., and 354 f., 356 f., 358 ff., 372 ff., 380 ff., 398; cf. 401; *idem*, PW, 10 (1919), 1574.51 ff.; Schmidt-Rühl, *Handbuch*, 503. On Tauromenium, see Nilsson, *Entstehung*, 52.

[173] W. Kubitschek, 'Kalenderstudien,' *Jahreshefte des österreichischen archäologischen Institutes*, 8 (1905), 109, 112 n. 28, 115; cf. *idem*, *Grundriss*, 141 f.

[174] Cf. Plutarch, *Numa*, 18 f., and *Aetia Romana*, 19; J. Lydus, *De mensibus*, 4, 121 (158.14 ff. and *passim*).

[175] MPG, 59, 746D; cf. Julian, *Misopogon*, 361D, ed. Wright, 2, 486.

[176] Ed. Henri Grégoire, *Recueil d'inscriptions grecques chrétiennes d'Asie Mineure*, 1 (Paris, 1922), no. 255.2, 5, 9 f., no. 309.10.

though the eighth and the twenty-second days of the month are stated by him (p. 189 *supra*) to be the eighth ἱσταμένου and the eighth φθίνοντος respectively, they are so entitled only because of his eagerness to use the regressive count (p. 232 *infra*). From our point of view, they would be the first of μεσοῦντος and the first of ἀπιόντος. In this way, he combines the tesserahebdomadal seven-day week with another system, which divides the month into two parts, with regressive counting of the days in the latter half of each of the two parts. The following scheme will make this clear:

1 2 3 4 5 6 7
8 7 6 5 4 3 2
1 2 3 4 5 6 7
8 7 6 5 4 3 2
29 30

The first day of the month is called νουμηνία, the fifteenth, διχομηνία, and the last, ἕνη καὶ νέα. In a hollow (κοῖλος) month (29 days), the day immediately following the δευτέρα τοῦ μηνὸς φθίνοντος (the twenty-eighth day in our reckoning) is the ἕνη καὶ νέα. In a full (πλήρης) month, however, this day is the ἕνη; and the next day (our thirtieth) is the ἕνη καὶ νέα. Thus, the last day of every month is the ἕνη καὶ νέα; only full months have a day known as the ἕνη.

From these data and an examination of Pletho's sources it can be seen that Pletho has (1) taken over the seven-day lunar week of the astronomers and astrologers, and (2) superimposed upon it certain elements of the Solonian calendar of ancient Greece.

Before considering these two features of Pletho's month, it is necessary, in view of Täschner's theory that the lunar aspects of Pletho's calendar were derived from Islamic sources,[177] to draw attention once again to the fact that the lunar month, whatever its origin, was in classical times a characteristic Greek institution, as a host of texts of all periods of Greek literature clearly demonstrate.[178] Even at the end of the Byzantine Middle Ages, in the fif-

[177] See the works cited in n. 28 *supra*.

[178] In addition to the texts cited in notes 185, 236, 238, 245, and *passim*, see Scholia on Aratus, *Phaenomena*, 735 (473.15 ff.): μῆνα κυρίως ἔλεγον οἱ Ἕλληνες τὸν χρόνον τὸν ἀπὸ τῆς σεληνιακῆς συνόδου παρὰ τὴν μήνην μῆνα ὀνομάσαντες· ἐμέτρουν γὰρ οἱ Ἕλληνες πρὸς τὸν τῆς σελήνης δρόμον τοὺς μῆνας. Ammonius, *In Aristotelis Categorias commentarius*, ed. A. Busse (Berlin, 1895), 60.24–6: ὁ χρόνος γὰρ μέτρον ἐστὶ κινήσεως· μῆνα γὰρ λέγομεν τὴν τῆς σελήνης ἀποκατάστασιν, ἐνιαυτὸν δὲ τὴν τοῦ ἡλίου. . . . Simplicius, *In Aristotelis Categorias commentarium*, ed. C. Kalbfleisch (Berlin, 1907), 346.33 f.; scholium on Plato, *Laws*, 8, 849B (338): κατὰ γὰρ σελήνην ἦγον τοὺς μῆνας. *Anecdota Graeca*, ed. I. Bekker, 1, 280; Pseudo-Zonaras, *Lexicon*, *s.v.* μήν: χρόνος ἀπὸ συνόδου ἡλίου καὶ σελήνης ἐπὶ τὴν ἑξῆς σύνοδον. . . . ἀφ' οὗ καὶ μήνη [ἡ σελήνη]. Cf. Aristophanes, *Clouds*, 615–26.

teenth century, the lunar calendar served as a basis for dream books and *Prophetologia* of various sorts, which gave special interpretations and astrological prognostications for every day of the month.[178a]

Originally, μήν, the Greek word for month, had been a synonym for σελήνη, 'moon.' This is demonstrated by the etymological relationship between μήν and words like μήνη, μηνίσκος, σκοτομήνιος, etc.,[179] and by a number of passages in the earliest extant texts. Thus, in Hesiod's *Works and Days*, a poem read and cited by Pletho, μηνὸς ἀεξομένοιο obviously refers to the waxing moon,[180] and the expressions μὴν ἱστάμενος and μὴν φθίνων in Homer and Hesiod [181] originally connoted phases of the moon. Unmistakable evidence of this is to be found in two texts, one from the *Iliad* (ὁ δ' ἕβδομος ἑστήκει μείς), and one from the Homeric *Hymn to Hermes* (δέκατος μὲις οὐρανῷ ἐστήρικτο), where, behind the free translation, 'seven (ten) months later,' lies the astronomical fact, literally expressed, of the reappearance of the moon in the sky for the seventh (tenth) time, as, e.g., 'the tenth moon stood in the sky.' [182]

Still more explicit is the Stoic Chrysippus (Pletho's ethical system was, he tells us at the beginning of the *Nomoi*, greatly indebted to the Stoics), who says that the periodic cycle of the moon was called a month, and specifically identifies μείς, a dialectical form for μήν, with the visible part of the moon: μῆνα δὲ καλεῖσθαι τὴν τοῦ δρόμου αὐτῆς [*sc.* σελήνης] περίοδον. μὲις δ' ἐστί, φησί, τὸ φαινόμενον τῆς σελήνης πρὸς ἡμᾶς, ἢ σελήνη μέρος ἔχουσα φαινόμενον πρὸς ἡμᾶς.[183] Another Stoic, Philodemus, makes a somewhat similar equation in his *De pietate*, where he says that σελήνη and μήν are only feminine and masculine grammatical forms for the same thing.[184] This earlier usage was not forgotten in later times, and medieval writers explain that μήν (month) is derived from μήνη (moon). As the *Etymologicon mag-*

[178a] S. G. Mercati, 'Onirocritico lunare secondo i codici Vat. gr. 342 e Berl. gr. 168,' BZ, 32 (1932), 263–66; CCAG, 3, edd. A. Martini et D. Bassi (Brussels, 1901), 32–40 (13th c.); CCAG, 4, edd. D. Bassi, A. Martini, F. Cumont, A. Olivieri (*ibid.*, 1903), 142–45 (15th c.); CCAG, 8.1, ed. Cumont (*ibid.*, 1929), 152 f. (13th c.); CCAG, 8.3, ed. P. Boudreaux (*ibid.*, 1912), 181–87 (*selenodromion* for all 12 months: 15th c.); CCAG, 8.4, edd. Boudreaux et Cumont (*ibid.*, 1921), 103–7 (dated 1503).

[179] Notes 179–82 are based upon Nilsson, *Entstehung*, 26 f., 30 f.; cf. *idem*, *Primitive time-reckoning*, 167 f.; and ARW, 14 (1911), 432 f.; Walther Sontheimer, *s.v.* Monat, PW, 16 (1935), 44 f.

[180] v. 772 f. Pletho refers to τὴν ἀγαθὴν Ἡσιόδου ἔριν (*Works and Days*, 10 ff.): MPG, 160, 944D.

[181] *Odyssey*, 14.162; 19.307; Hesiod, *Works and Days*, 780.

[182] *Iliad*, 19.117; *Hymn to Hermes*, 11.

[183] *Stoicorum veterum fragmenta*, ed. J. von Arnim, 2 (Leipzig, 1903), 199.33 f. = Stobaeus, *Eclogae*, 1, 26 (1, 219.27–220.2) = Diels, *Doxographi Graeci*, 467.19 ff.

[184] von Arnim, *loc. cit.*, 315.11–13. = Diels, *op. cit.*, 546b.15 f.

num and the *Etymologicum Gudianum* put it, *μὴν γὰρ παρὰ τὸ μήνη, ὃ σημαίνει τὴν σελήνην, δι' αὐτῆς γὰρ τελειοῦται ὁ μήν.*[185]

1. THE SEVEN-DAY WEEK

Pletho's seven-day week, which is the basis of his month, is not, as might at first be supposed, a mark of the influence of Christianity. Nor is it altogether identical with the planetary week of the pagans. The former was unsuitable because of Pletho's hostility to Christianity, which the *Nomoi* was intended to replace, while the latter apparently departed too radically from the usage of the Greeks of the classical period to be deemed worthy of inclusion in his system.

As is well known, special significance attached to the number seven in ancient Greece, above all in Delphic and Pythagorean circles; and periods of seven days, which have been traced back to Homeric times, are of frequent occurrence not only in medical texts like the pseudo-Hippocratic *περὶ ἑβδομάδων* and Galen's *περὶ κρισίμων ἡμερῶν*, but in all types and epochs of Greek literature. A number of ancient testimonia illustrating the extraordinary character of the number seven, including spurious passages from Homer and Hesiod, were collected by Clement of Alexandria in his *Stromata*; a similar catena is to be found in the *Praeparatio Evangelica* of the ecclesiastical historian Eusebius.[186] The pagan character of the seven-day week during the early centuries of the Christian era is especially notable in the planetary names of the days of the week. These pagan designations, the names of ancient gods (the Greek equivalents for our modern days from Sunday to Saturday being Ἥλιος, Σελήνη, Ἄρης, Ἑρμῆς, Ζεύς, Ἀφροδίτη, and Κρόνος), seem to have been current at least as early as the second century of our era. They were first systematically discussed by Vettius Valens,[187] an astrologer of the time of the Antonines, and about a century later by the historian Cassius Dio.[188] Plutarch is another pagan witness from the early

[185] *S.vv.*; See also *Chronicon Paschale*, 1, 29.1–4; J. Lydus, *De mensibus*, 3, 2 (38.1–2); John Philoponus, *De opificio mundi*, 4, 14 (188.13–15); Isidore of Seville, *Etymologiae*, 5, 33, MPL, 82, 219A; Pseudo-Zonaras, *Lexicon*, *s.v.* *μήν*, quoted in n. 178 *supra*.

[186] See bibliography, with mention of five important monographs by Roscher, in PW, 7 (1912), 2547. Full collections of material are to be found in I. E. Kalitsounakis, '*Ἑπταδικαὶ ἔρευναι*,' *Ἀθηνᾶ, σύγγραμα περιοδικὸν τῆς ἐν Ἀθήναις Ἐπιστημονικῆς Ἑταιρείας*, 33 (1921), 103–99, *n.b.* 125 ff.

[187] *Anthologiae*, 1, 10, ed. Kroll, 26.10–33. On the names of the planets in general, see Franz Cumont, 'Les noms des planètes chez les Grecs,' *Antiquité Classique*, 4 (1935), 1–43; cf. M. P. Nilsson, 'The origin of belief among the Greeks in the divinity of the heavenly bodies,' HTR, 33 (1940), 1–8. F. J. Dölger, 'Die Planetenwoche d. griechisch-römischen Antike u. d. christliche Sonntag,' *Antike u. Christentum*, 6 (1940), 202–238, has not yet reached the U. S.

[188] *Historia Romana*, 37, 18 f.; Xiphilinus, 8, 14 – 9, 24; see Franz Boll *s.v.* Hebdomas, PW, 7 (1912), 2547–78. F. H. Colson, *The week* (Cambridge, Eng., 1926), offers a popular re-

period; but of his treatment of the subject nothing remains except the title, *Διὰ τί τὰς ὁμωνύμους τοῖς πλάνησιν ἡμέρας οὐ κατὰ τὴν ἐκείνων τάξιν, ἀλλ' ἐνηλλαγμένως ἀριθμοῦσιν.*[189] Of the later expositions of the origin of the system, one of the most interesting is that of John Lydus in the *De mensibus*, which traces back the institution of the seven-day week to the circle of Zoroaster and Hystaspes,[190] the former of whom is named by Pletho, along with Plato, as his chief source in the field of theology.[191] To this the scholiast on Plato's *First Alcibiades*, 121E, adds that the number seven was associated with Mithra and that the Persians held it in high regard.[192]

In the Latin West the pagan names of the days of the week gained the ascendancy over the ecclesiastical designations (*dominica, feria secunda, tertia*, etc.).[193] In the East, however, the Church was so successful in stamping out the pagan forms and substituting its own (*Κυριακή, δευτέρα, τρίτη, τετάρτη, πέμπτη, παρασκευή, σάββατον*) that the use of the planetary names in the fifteenth century by Laonicus Chalcocandyles, the 'last Athenian writer,' is a bit of conscious archaism,[194] although the astrologers continued to use the planetary names throughout the Middle Ages, as can be seen in numerous texts printed in the *Catalogi codicum astrologorum Graecorum.*

The relative lack of popularity of the planetary names of the days of the week in the Greek world may have had some influence upon Pletho. For there is no trace of them in his chapter on the calendar (which gives unambiguous prescriptions for strictly numerical designations), or in the daily hymns (which were to be sung on each day of the week).[195] Although Pletho does not assign planetary names to the days of the week, he does know the pagan names of the planets current in the early Middle Ages, and gives them in the following order: *Ἥλιος, Σελήνη, Φωσφόρος, Στίλβων, Φαίνων, Φαέθων, Πυρόεις.*[196] The guiding principle for Pletho, no doubt, was

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view of the main results of the researches summarized by Boll, and in the handbooks of Ginzel and Kubitschek.

[189] *Quaestiones convivales*, 4, 7 (672C).

[190] 2, 4 (21.1 ff.). Almost the whole of the second book of the *De mensibus* (*περὶ ἡμέρας*) is devoted to the pagan names of the days of the week and their supposed significance.

[191] Alexandre, 2; cf. Part II *infra*.

[192] Ed. Greene, 99.

[193] E. Schürer, 'Die siebentägige Woche im Gebrauche d. christl. Kirche d. ersten Jahrhunderte,' *Ztschr. f. die neutestamentliche Wissenschaft*, 6 (1905), 1 ff.; Ginzel, *Handbuch*, 3 (1914), 97 ff.; Franz Rühl, *Chronologie des Mittelalters u.d. Neuzeit* (Berlin, 1897), 55.

[194] Rühl, *op. cit.*, 60 n. 2; Laonicus Chalcocandyles, ed. I. Bekker (Bonn, 1843), 121, 394; ed. E. Darkó (Budapest, 1922–27), 1, 113.10, 2.2, 159.3 f. Theodore of Gaza (MPG, 19, 1208D) remarks that in his day the Latins used the planetary names for the days of the week, and that the Byzantines designated them as *κυριακή, δευτέρα*, etc.

[195] Alexandre, 58–62, 222–6; cf. 202–20, 232 ff.

[196] (Or in the more familiar Latin equivalents: Sol, Luna, Venus, Mercurius, Saturnus,

the lack of ancient precedent for the planetary names. As Cassius Dio (writing *ca.* 235) had said,

> The dedication of the days to the stars called planets . . . is now universal, though its origin is comparatively recent. So far as I can tell, the ancient Greeks knew nothing about it.[197]

The popular view that the seven-day week (ἑβδομάς) arose because each of the four principal phases of the moon lasts approximately seven days has been doubted.[198] Nevertheless, a number of sources, Jewish, Christian, and pagan, provide evidence which lends itself to this interpretation. In a passage in the *De opificio mundi*, thought to have been derived from the Stoic sage, Posidonius, Philo, in the course of an extended discussion of the peculiar virtue of the number seven, says:

> . . . [the moon] increases from its first appearance as a crescent [i.e., from the first visible appearance of the new moon] till it becomes half moon ['first quarter'] in seven days; then in as many more it becomes full and again returns the same way, circling around its orbit, from full moon to half moon ['third quarter'] in seven days as before; then from the half to the crescent in the same number of days, making, all in all, the above-mentioned total [of 28 days].[199]

Among the Christians, Clement of Alexandria makes a similar analysis of the lunar month:

> The phases of the moon change every seven days. In the first week [or, period of seven days], it becomes half moon [i.e., reaches 'first quarter']; in the second it becomes full. In the third, as it wanes, it again becomes half moon ['third quarter']; and in the fourth it loses its light [as 'new moon'].[200]

In the same manner, John Lydus names four phases of the moon (σύνοδος, πανσέληνος, διχότομοι δύο), and associates each one with variations in heat or humidity, as do the anonymous Christian writer mentioned above and the unnamed authors, presumably Christian, of a *Quadrivium* (ca. 1040) and of an undated *Opusculum de variis anni tempestatibus.*[201]

Jupiter, Mars): *ibid.*, 164.23–166.6, 210 (9th hymn). For the development of this nomenclature, see Cumont, *loc. cit.* (in n. 187), 1–43, esp. 39, 42.

[197] *Historia Romana*, 37, 18.

[198] Kubitschek, *Grundriss*, 31 ff.

[199] 34 (101): αὔξεται μὲν γὰρ [*sc.* ἡ σελήνη] ἀπὸ τῆς πρώτης μηνοειδοῦς ἐπιλάμψεως ἄχρι διχοτόμου ἡμέραις ἑπτά, εἶθ' ἑτέραις τοσαύταις πλησιφαὴς γίνεται, καὶ πάλιν ὑποστρέφει διαυλοδρομοῦσα τὴν αὐτὴν ὁδόν, ἀπὸ μὲν τῆς πλησιφαοῦς ἐπὶ τὴν διχότομον ἑπτὰ πάλιν ἡμέραις, εἶτ' ἀπὸ ταύτης ἐπὶ τὴν μηνοειδῆ ταῖς ἴσαις· ἐξ ὧν ὁ λεχθεὶς ἀριθμὸς [*sc.* κη'] συμπεπλήρωται. Cf. A. Schmekel, *Die philosophie d. mittleren Stoa* (Berlin, 1892), 409 ff., 419 f., 424 ff.; and F. Boll, *PW*, 7 (1912), 2551.43 ff.

[200] *Stromata*, 6, 16, 143, 1–2, ed. Otto Stählin, 2 (Leipzig, 1906), 504.24–505.1: ἡ σελήνη τε δι' ἑπτὰ ἡμερῶν λαμβάνει τοὺς μετασχηματισμούς. κατὰ μὲν οὖν τὴν πρώτην ἑβδομάδα διχότομος γίνεται, κατὰ δὲ τὴν δευτέραν πανσέληνος, τρίτῃ δὲ ἀπὸ τῆς ἀποκρούσεως αὖθις διχότομος, καὶ τετάρτῃ ἀφανίζεται.

[201] *De mensibus*, 2, 9 (29.13–30.1); Cramer, *Anecdota Graeca*, 1, 380.5 ff.; *Anonymi*

Pletho may have brushed aside the testimony of these Jewish and Christian witnesses, but he would have been more respectful towards pagan writers. A division of the lunar month into four parts, into what we should call weeks, is implicit in Aristotle's discussion of the periods of the moon in his *De generatione animalium*, where he says:

. . . By a natural period I mean a day, a night, a month, and a year, and the units of time measured by these, and also the periods of the moon, that is, the full moon and her disappearance [*sc.* at the time of the new moon], and the halves of the time between these, for it is by these that the moon's orbit fits in with that of the sun.[202]

More detailed is the account in the *De signis temporum* of Theophrastus, whose *Historia plantarum* Pletho had excerpted:[203]

. . . Most important of all are the signs taken from the sun and the moon, for the moon is like a nocturnal sun . . . Now the first point to be grasped is that the various periods are all divided in half, so that the year, the month, and the day must be studied from the point of view of these divisions. The year is divided in half by the setting and rising of the Pleiades . . . and a like division is effected by the solstices and equinoxes . . . So, too, it is with each month; the full moon and the eighth and the fourth days make divisions into halves; it is therefore necessary to make the new moon the starting point of our study. A change [*sc.* in weather] most often takes place on the fourth day, or, if not then, on the eighth, or else on the day of the full moon; thereafter, the periods run from the full moon to the eighth day from the end of the month, and from that to the fourth day from the end, and from that to the new moon.[204]

Logica et Quadriuium cum scholiis antiquis, ed. J. L. Heiberg (*Det Kgl. Danske Videnskabernes Selskab, Historisk-filologiske Meddelelser*, 15.1 [Copenhagen, 1929]), 118.26 ff., 119.1 ff.; *Parisinus Graecus 2992*, f. 369^{r}, ed. Armand Delatte, *Études sur la littérature Pythagoricienne* (*Bibliothèque de l'École des Hautes Études*, 217 [1915]), 186. Cf. Anatolius (*op. cit.*, in n. 210), 36.4 ff., 55 ff.; Diels-Kranz, *Fragmente d. Vorsokratiker*, 1, 179.10 ff.

On the date of Heiberg's *Quadrivium*, see Heiberg, *op. cit.*, v, xix (1040), 108.14, 109.10 (1008); cf. Aubrey Diller, *Isis*, 36 (1945–46), 132.

[202] 4, 10, 777b.16 ff.: εὐλόγως δὲ πάντων οἱ χρόνοι καὶ τῶν κυήσεων καὶ τῶν γενέσεων καὶ τῶν βίων μετρεῖσθαι βούλονται κατὰ φύσιν περιόδοις. λέγω δὲ περίοδον ἡμέραν καὶ νύκτα καὶ μῆνα καὶ ἐνιαυτὸν καὶ τοὺς χρόνους τοὺς μετρουμένους τούτοις, ἔτι δὲ τὰς τῆς σελήνης περιόδους. εἰσὶ δὲ περίοδοι σελήνης πανσέληνοί τε καὶ φθίσεις καὶ τῶν μεταξὺ χρόνων αἱ διχοτομίαι· κατὰ γὰρ ταύτας συμβάλλει πρὸς τὸν ἥλιον. I have revised the translation of Arthur Platt, edd. J. A. Smith, W. D. Ross, *The works of Aristotle*, 5 (Oxford, 1912). Cf. *Historia animalium*, 7, 17, 570a.29–31; pseudo-Heraclitus, ed. Diels-Kranz, *loc. cit.*

[203] The excerpts are extant in *Venetus Graecus 406*: Morelli, *Bibliotheca manuscripta*, 270.

[204] I, 5–8; I have used, with a few minor alterations, the Loeb translation of Sir Arthur Hort: μάλιστα δὲ κυριώτατα ⟨τὰ⟩ [*sc.* σημεῖα] ἀπὸ τοῦ ἡλίου καὶ τῆς σελήνης· ἡ γὰρ σελήνη νυκτὸς οἷον ἥλιός ἐστι . . . Πρῶτον μὲν οὖν ληπτέον ὅτι αἱ διχοτομίαι διορίζουσι τὰς ὥρας, ὥστε ἐπὶ τούτων δεῖ ἀθρεῖν καὶ ἐνιαυτὸν καὶ μῆνα καὶ ἡμέραν. διχοτομεῖ δὲ τὸν μὲν ἐνιαυτὸν Πλειάς τε δυομένη καὶ ἀνατέλλουσα . . . ὁμοίως δὲ καὶ αἱ τροπαὶ καὶ ἰσημερίαι ποιοῦσιν . . . Ὡς δ' αὕτως ἔχει καὶ περὶ τὸν μῆνα ἕκαστον· διχοτομοῦσι γὰρ αἵ τε πανσέληνοι καὶ αἱ ὀγδόαι καὶ αἱ τετράδες, ὥστε ἀπὸ νουμηνίας ὡς ἀπ' ἀρχῆς δεῖ σκοπεῖν. μεταβάλλει γὰρ ὡς ἐπὶ τὸ πολὺ ἐν τῇ τετράδι, ἐὰν δε μή, ἐν τῇ ὀγδόῃ, εἰ δὲ μή, πανσελήνῳ· ἀπὸ δὲ πανσελήνου εἰς ὀγδόην φθίνοντος, καὶ ἀπὸ ταύτης εἰς τετράδα, ἀπὸ δὲ τετράδος εἰς τὴν νουμηνίαν.

Closely related to Aristotle and Theophrastus here is the description of the phases of the moon in the *Eisagoge* of Geminus, who defines a month as the time between two successive conjunctions of the sun and moon (i.e., new moons) or two successive full moons.[205] The days of the month, he says, are named after the phases of the moon,[206] four in number according to him, all of which occur twice each month.[207] These phases are: μηνοειδής (sickle-like = new moon, at the beginning of the month), διχότομος ('first quarter,' around the eighth of the month), ἀμφίκυρτος ('gibbous moon,' around the twelfth), πανσέληνος (full moon, at διχομηνία, 'half-month'), the second 'gibbous moon' (around the eighteenth), 'third quarter' (διχότομος, around the twenty-third), and μηνοειδής again (at the end of the month). Geminus says the figures for each of the phases vary two days or so because of the irregularity of the moon's motion (κατὰ τὴν ἀνωμαλίαν τῆς κινήσεως), so that the second διχότομος (third quarter), for example, fluctuates between the twenty-first and twenty-third.[208] These divisions of the lunar month are mentioned also in the scholia on the *Phaenomena* of Aratus.[209]

Pletho has followed the example of Aristotle, Theophrastus, and Geminus (if he knew Geminus) almost to the letter, disregarding Theophrastus (and Geminus) only in the matter of the four-day intervals, i.e., the days of the gibbous moon, which, added to the others, make up the total of seven lunar phases a month frequently mentioned in Greek astronomical works.[210] But the pivotal points of his month are the first (νουμηνία), the eighth, the fifteenth (= full moon or διχομηνία), the twenty-second (the eighth day from the end of the month), and the end of the month, just as Aristotle and Theophrastus had prescribed. Each of these days, it should be noted, coincides with an important phase of the moon.

[205] *Eisagoge*, 8, 1 (100.3 f.): μήν ἐστι χρόνος ἀπὸ συνόδου ἐπὶ σύνοδον ἢ ἀπὸ πανσελήνου ἐπὶ πανσέληνον.

[206] *Ibid.*, 8, 10 (102.24–6): τὸ δὲ κατὰ σελήνην ἄγειν τὰς ἡμέρας τοιοῦτόν ἐστι τὸ ἀκολούθως τοῖς τῆς σελήνης φωτισμοῖς τὰς προσηγορίας τῶν ἡμερῶν γίνεσθαι. Cf. *ibid.*, 8, 11–14 (104.1–25).

[207] *Ibid.*, 9, 11 f. (128.6–15). He neglects to point out that the full moon comes only once a month.

[208] *Ibid.*, 9, 15 (128.16–31).

[209] *Phaenomena*, 733 ff., 805 ff., with scholia, ed. Maass, 472.11 f., 487.11 ff. Cf. CCAG, 11.2, ed. C. O. Zuretti (Brussels, 1934), 174.3–12.

[210] Anatolius, περὶ δεκάδος καὶ τῶν ἐντὸς αὐτῆς ἀριθμῶν, ed. J. L. Heiberg, *Annales internationales d'histoire, Congrès de Paris*, 1900, *V^e sec., Hist. des sciences* (Paris, 1901), 36.3 f.; cf. 35.13 f.; [Iamblichus], *Theologoumena arithmeticae*, ed. V. de Falco (Leipzig, 1922), 59.18–60.18 (from Nicomachus of Gerasa), etc. See G. Borghorst, *De Anatolii fontibus* (Berlin, 1905), 7 f., 12 f., 40, and *passim*. Cf. Suidas, *s.v.* τετρακτύς: οἱ αὐτοὶ [*sc.* the Pythagoreans] ἐτίμων καὶ τὰ τέσσαρα, διὰ τὰς τέσσαρας τῆς σελήνης μορφάς· ἀρτίτοκος γὰρ μηνοειδής, ἀμφίκυρτος καὶ πανσέληνος. The astrologers counted as many as 11 phases of the moon: CCAG, 7, ed. F. Boll (Brussels, 1908), 116 f.; CCAG, 8.4, edd. P. Boudreaux et F. Cumont (*ibid.*, 1921), 203–5.

In adopting this arrangement, Pletho was continuing the tradition of pagan scientists of the Christian era like Theon of Smyrna (*ca.* 130), who says:

> The month is completed in four periods of seven days; in the first period, the moon appears at 'first quarter,' and in the second it is full, in the third it appears at 'third quarter,' and in the fourth it is in conjunction with the sun and marks the beginning of the new month. The progression takes place in periods of seven days.[211]

A description of the month in similar terms is to be found in the *περὶ κρισίμων ἡμερῶν* of Galen, the pagan physician of the second century, and an analysis of the lunar month into four *ἑβδομάδες* of seven days each occurs also in the *Theologoumena arithmeticae* attributed to Pletho's source, Iamblichus, who quotes from the *Introductio arithmetica* of Nicomachus of Gerasa (middle of the first century) and from the *περὶ δεκάδος* of Anatolius, the learned bishop of Laodicea in the latter part of the third century.[212]

Of greater importance for Pletho than any of these was Proclus, who in expounding Plato's account of the Vision of Er in the sixth book of the *Republic* (616BC) and the seven-day sojourn of the spirits in the meadow there described says:

> [The spirits] remained in the meadow seven days, because the phases of the moon . . . change in accordance with this number . . . For this number engenders time, as the Pythagoreans also say, and is of considerable significance for the living beings of the earth and for the ages [*sc.* of man]. If, then, the moon varies its direction and its form every seven days, and mortal creatures undergo change seven times, it is not remarkable that. . . .[213]

Then taking up Plato's statement of the four-day journey upward from the meadow to the realm of light, Proclus goes on to say:

> Days [*sc.* of the year] we reckon by the motion of the sun, and months by that of the moon. And, the number four being a solar measure [*sc.* in counting the seasons of

[211] *Expositio rerum mathematicarum ad legendum Platonem utilium*, ed. E. Hiller (Leipzig, 1878), 103.19–104.1: *μὴν δὲ καθ' ἑβδομάδας τέσσαρας συμπληροῦται, τῇ μὲν πρώτῃ ἑβδομάδι διχοτόμου τῆς σελήνης ὁρωμένης, τῇ δὲ δευτέρᾳ πλησισελήνου, τῇ δὲ τρίτῃ διχοτόμου, πάλιν δὲ τῇ τετάρτῃ σύνοδον ποιουμένης πρὸς ἥλιον καὶ ἀρχὴν ἑτέρου μηνός. αἵ τε αὐξήσεις καθ' ἑβδομάδα.* Cf. Schmekel, *op. cit.* (n. 199 *supra*), 419 f., 424 ff.

[212] Galen, *op. cit.*, 3, 5, ed. C. G. Kühn, *Medicorum Graecorum opera*, 9 (Leipzig, 1825), 908.4 ff.: *ὥσπερ οὖν τὸν ὅλον ἐνιαυτὸν ὁ ἥλιος, οὕτως ἡ σελήνη διατάττει τὸν μῆνα, καθ' ἑβδομάδας τῆς ἀλλοιώσεως ἐν αὐτῇ γιγνομένης. ἀπό τε γὰρ τῆς πρώτης φάσεως ἐπὶ τὴν διχότομον, ἀπό τε ταύτης ἐπὶ τὴν πανσέληνον ἑκάτερος μὲν ὁ χρόνος ἡμερῶν ἐστιν ἑπτά, συναμφότερα δὲ τεσσαρεσκαίδεκα. κατὰ ταὐτὰ δὲ κἂν εἰ μετὰ τὴν διχοτομηνιαίαν ἕως τῆς δευτέρας διχοτόμου συναριθμήσῃς, ἑπτὰ καὶ ταύτας εὑρήσεις τὰς ἡμέρας, καὶ τὰς λοιπὰς δὲ τὰς μέχρι τοῦ παντελῶς ἀφανισθῆναι τὴν σελήνην ἑπτά.* *Ibid.*, 910.6 f.; Iamblichus, *op. cit.* (in n. 210 *supra*), 54.11 ff., 59.18 ff. Cf. Aulus Gellius, *Noctes Atticae*, 3, 10, 6; Olympiodorus, *Prolegomena et in* [*Aristotelis*] *Categorias commentarium*, ed. A. Busse (Berlin, 1902), 92.30–2; John Philoponus, *In Aristotelis Physicorum libros v posteriores commentaria*, ed. Hieronymus Vitelli (Berlin, 1888), 777.30 ff., 782.21 f.

[213] *In Rem Publicam*, 2, 190.29–191.10: *ἑπτὰ μὲν γὰρ ἡμέρας ἐν τῷ λειμῶνι γεγόνασιν, ἐπειδήπερ*

the year], just as the number seven is connected with the moon, so the number four is connected with the sun; and just as the number seven is commonly taken as a measure of the days of the moon, so the former [i.e., the number four] is in general use as a measure of the months of the sun.[214]

Of possible significance also in this connection, as Proclus's reference to Pythagoras in the former of these two passages suggests, is the Pythagorean theory of numbers, according to which the number seven was identified, or closely connected, with 'time' or 'period' (*καιρός*). This association is frequently mentioned by Asclepius (second century) and by philosophers known to Pletho, like Iamblichus and Syrianus (the master of Proclus). Asclepius says the Pythagoreans called the number seven 'time' (*καιρός*), because of its connection with the course of the moon around the sun, and because the process of growth and development were measurable in groups of seven (*κατὰ ἑβδομάδα*).[215] The Pythagoreans regarded the number seven with awe,[216] and described it as *παρθένος ἀμήτωρ*, because it was the only number from one to ten that was neither a factor of any of the others nor a product of any whole number except itself multiplied by one. John Philoponus, the Christian philosopher of the sixth century, who never entirely forsook pagan ways of thinking, makes use of this Pythagorean concept of the number seven in explaining why God rested on the seventh day.[217]

These Pythagorean notions were widely known and may not have been

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αἱ τῆς σελήνης φάσεις . . . κατὰ τὸν ἀριθμὸν ἐξαλλάττονται τοῦτον . . . καιροφυὴς γὰρ ἀριθμὸς οὗτος, ὡς καὶ οἱ Πυθαγόρειοι λέγουσιν, καὶ ἐν τοῖς τῇδε ζῴοις καὶ ταῖς ἡλικίαις πολὺ τὸ κράτος ἐπιδεικνύμενος. εἰ οὖν καὶ ἡ σελήνη κατὰ τὴν ἑβδομάδα τοὺς δρόμους ἐξαλλάττει καὶ τὰ σχήματα καὶ τὰ θνητὰ ζῷα κατὰ τοῦτον ποικίλλεται τὸν ἀριθμόν, οὐδὲν θαυμαστόν. . . .

[214] *Ibid.*, 191.14–19: *ἡμέρας μὲν γὰρ ἀριθμοῦμεν διὰ τὴν ἡλιακὴν κίνησιν, μῆνας δὲ διὰ τὴν σεληναίαν. ὅτι δὲ ἡλιακόν ἐστιν μέτρον ἡ τετράς, καὶ ὡς σελήνης ἑβδομάς, οὕτως ἡλίου φήμην ἔσχεν ἡ τετράς, καὶ ὡς ἡμερῶν ἐπὶ σελήνης ἑβδομάς, οὕτως μηνῶν ἐπὶ ἡλίου μέτρον ἐκείνη, τεθρύληται πα[ρὰ πᾶσιν . . .]*. Cf. *ibid.*, 192.4 ff.

[215] Asclepius, *In Aristotelis Metaphysicorum libros A–Z commentaria*, ed. M. Hayduck (Berlin, 1888), 34.21 ff., 36.1–3, 11 ff.; Iamblichus, *op. cit.* (in n. 210), 70.13–71.12; Syrianus, *In [Aristotelis] Metaphysica commentaria*, ed. W. Kroll (Berlin, 1902), 104.26, 130.33; cf. 191.13 ff. Gustav Junge, 'Die pythagoreische Zahlenlehre,' *Deutsche Mathematik*, 5 (1940–41), 343, 356, is devoted to generalities, and makes little use of the original sources.

[216] Philo, *De opificio mundi*, 33 (99 f.); Theon of Smyrna, *op. cit.*, 103.1 ff.; scholia on Aratus, *Phaenomena*, 806 (487.24–488.1); Iamblichus, *op. cit.*, 57.13–58.10 ff. (a passage taken from Nicomachus): *ὅτι τὴν ἑπτάδα οἱ Πυθαγόρειοι οὐχ ὁμοίαν τοῖς ἄλλοις φασὶν ἀριθμοῖς, ἀλλὰ σεβασμοῦ φασιν ἀξίαν, κτλ.*

[217] Philo and Theon, *loc. cit.*; Anatolius of Laodicea, *op. cit.* (in n. 210), 35.6 ff., 36.25 ff.; Alexander Aphrodisiensis, *In Aristotelis Metaphysica commentaria*, ed. M. Hayduck (Berlin, 1891), 39.3 ff.; Iamblichus, *op. cit.*, 54.11 f. (from Anatolius), 58.19 ff., 71.3 ff. (from Nicomachus); John Philoponus, *De opificio mundi*, 7, 14 (306.17–20); J. Lydus, *De mensibus*, 2, 12; 3, 9 (33.14–16, 43.1 ff.). Cf. Proclus, on Hesiod, *Works and Days*, 767 (420.3 ff.); *idem*, *In Timaeum*, 2, 203.6, 236.17–20. On the text of the passages quoted from Lydus, see F. Börtzler, 'Zum Texte des Johannes Laurentius Lydus "De mensibus,"' *Philologus*, 77 (N.F. 31, 1921), 370 ff.

without effect upon Pletho, who cites Pythagoras among his principal authorities. On the basis of such pagan texts, Pletho had ample non-Christian precedent to sanction his adoption of the seven-day week. He thus had the advantage of being able to adhere to classical models without departing radically from the dominant hebdomadal usage of the day.

2. THE ADJUSTMENT OF THE SEVEN-DAY WEEK TO THE ANCIENT SOLONIAN CALENDAR

The ancient scheme followed by Pletho is outlined in Plutarch's *Solon*, which carried special weight with him as the life of one of his principal sources written by another.[218] In the twenty-fifth chapter of this biography, which seems to have been used by Theodore of Gaza in his discussion of the Athenian calendar,[219] Plutarch says:

> Having noted the irregularity of the month, and that the motion of the moon does not always coincide with the rising and setting of the sun, but often overtakes and passes the sun on the same day, [Solon] ordered that day to be called the Old and the New, assigning the portion of it which preceded the conjunction [of the sun and moon] to the expiring month, and the remaining portion to the month that was just beginning. He was thus the first to understand the verse of Homer that speaks of a day when 'One month is waning, and the next is beginning.' The following day Solon called the first of the month. After the twentieth he did not count the days by adding them to twenty, but by subtracting them from thirty, regressively, like the waning of the moon.[220]

The line from Homer [221] quoted by Plutarch and one from the *Works and Days* of Hesiod, which mentions the thirteenth of the waxing month [moon] (*μηνὸς δ' ἱσταμένου τρισκαιδεκάτην*),[222] indicate that the Greek month was originally divided into only two parts — *μὴν ἱστάμενος* and *μὴν φθίνων*.[223]

[218] Pletho refers to Solon's famous interview with Croesus in his *ἐπὶ τῇ ἀοιδίμῳ Βασιλίδι Κλεόπῃ*, ed. S. Lampros, *Παλαιολόγεια καὶ Πελοποννησιακά*, 4 (Athens, 1930), 161.1 ff., and to its famous aftermath in his *προσφωνημάτιον πρὸς τὸν Κῦρ Δημήτριον Δεσπότην τὸν Πορφυρογέννητον*, *ibid.*, 207.6 ff., but it is impossible to determine whether his source here was Plutarch's *Solon*, 27 f., or the version in Herodotus 1, 32. Pletho quotes one of Solon's poems (Lampros, *loc. cit.*, 162.3–5).

[219] MPG, 19, 1188A–C; cf. 1201C.

[220] 25, 3; the translation is that of B. Perrin in the Loeb Library: *συνιδὼν δὲ τοῦ μηνὸς τὴν ἀνωμαλίαν, καὶ τὴν κίνησιν τῆς σελήνης οὔτε δυομένῳ τῷ ἡλίῳ πάντως οὔτ' ἀνίσχοντι συμφερομένην ἀλλὰ πολλάκις τῆς αὐτῆς ἡμέρας καὶ καταλαμβάνουσαν καὶ παρερχομένην τὸν ἥλιον, αὐτὴν μὲν ἔταξε ταύτην ἕνην καὶ νέαν καλεῖσθαι, τὸ μὲν πρὸ συνόδου μόριον αὐτῆς τῷ πανομένῳ μηνί, τὸ δὲ λοιπὸν ἤδη τῷ ἀρχομένῳ προσήκειν ἡγούμενος, πρῶτος, ὡς ἔοικεν, ὀρθῶς ἀκούσας Ὁμήρου λέγοντος,*

τοῦ μὲν φθίνοντος μηνός, τοῦ δ' ἱσταμένοιο,

τὴν δ' ἐφεξῆς ἡμέραν νουμηνίαν ἐκάλεσε. τὰς δ' ἀπ' εἰκάδος οὐ προστιθείς, ἀλλ' ἀφαιρῶν καὶ ἀναλύων, ὥσπερ τὰ φῶτα τῆς σελήνης ἑώρα, μέχρι τριακάδος ἠρίθμησεν.

[221] *Odyssey*, 14.162; 19.307.

[222] v. 780.

[223] Nilsson, *Entstehung*, 27, 30 f., and *Primitive time-reckoning*, 167 f. See, in addition, Müller, FHG, 1 (Paris, 1841), 414, no. 182; and Eustathius, on *Odyssey*, 14. 161 f., *Commentarii ad Homeri Odysseam*, 2 (Leipzig, 1826), 67.12 f. (1755.40 f.); *ἐλεύσεται ἐνθάδ' Ὀδυσσεύς, τοῦ μὲν φθίνοντος μηνός, τοῦ δ' ἱσταμένοιο, τουτέστι περὶ ἀκριβῆ τριακάδα μηνός. . . .*

This is what would be expected in a lunar calendar with the occurrence of a full moon in the middle of each lunation, and is confirmed by the designation, διχομηνία ('mid-month'), which is specifically equated with the day of the full moon in ancient and medieval texts.

This equation is found often in Geminus (who fixes διχομηνία between the thirteenth and the seventeenth)[224] and in Plutarch.[225] August Mommsen takes Plutarch's words in the seventh chapter of the *De gloria Atheniensium* to mean that in Plutarch's opinion the full moon fell on the sixteenth.[226] Plutarch says:

> They dedicated to Artemis the sixteenth of Munychion, the day on which the moon shone full upon the Greeks victorious at Salamis.[227]

But this does not necessarily mean the precise astronomical instant of the full moon, for the moon seems full to the naked eye at least a day or so before and after the exact moment of full moon. Moreover, in his life of Camillus,[228] as Mommsen points out, Plutarch puts the Athenian victory at Naxos, which he elsewhere,[229] like Polyaenus,[230] dates on the sixteenth of Boedromion, 'approximately at full moon' (περὶ τὴν πανσέληνον).

Whatever be the correct interpretation of Plutarch here, Pletho's decision to count διχομηνία as the fifteenth day every month is by no means unique. The *De arte rhetorica*, associated with the name of Dionysius of Halicarnassus, whose *Antiquitates Romanae* Pletho had excerpted, speaks of the fifteenth as the day on which the cycle of the moon is complete (πεντεκαιδεκάτη . . . καὶ . . . τέλειος ἐν τούτῳ ὁ κύκλος), and the moon consequently full.[231] The fifteenth, διχομηνία, and the day of the full moon are frequently equated;[232] and it was the regular Byzantine practice, especially in the later Middle Ages, to designate the fifteenth as the day of the full moon.[233] Suidas says διχομηνία was the middle of the month, the fifteenth

[224] *Eisagoge*, 9, 12 and 14 (128.12, 25–7); v. διχομηνία in index. (Lunar eclipses, of course, occur only at the time of the full moon.)

[225] *De Herodoti malignitate*, 26 (861F); *De facie in orbe lunae*, 16 (929BC).

[226] *Chronologie*, 101 f.

[227] 349F: τὴν δ' ἕκτην ἐπὶ δέκα τοῦ Μουνυχιῶνος Ἀρτέμιδι καθιέρωσαν, ἐν ᾗ τοῖς Ἕλλησι περὶ Σαλαμῖνα νικῶσιν ἐπέλαμψεν ἡ θεὸς πανσέληνος. Cf. *idem*, *Phocion*, 6, 3; Aeschines, 3, 98 (*Against Ctesiphon*).

[228] 19, 1.

[229] *De gloria Atheniensium*, 7 (349EF).

[230] *Strategmata*, 11, 2, edd. E. Woelfflin et I. Melber (Leipzig, 1887), 147.16 f.

[231] 3, 1; MPG, 160, 779–80, c. 8, 8. Cf. Gustav Bilfinger, *Der bürgerliche Tag* (Stuttgart, 1888), 42–45.

[232] Scholia on Aratus, on v. 735 (473.25 ff.), on v. 737 (474.17–19), on v. 805 (487.20 f.); Achilles Tatius, *Isagoge excerpta*, 21, *ibid.*, 49.19–22 = MPG, 19, 961D; Hesychius, *s.v.* διχομηνία; pseudo-Zonaras, *Lexicon*, *s.vv.* διχομηνία, πανσελήνου. Cf. J. Lydus, *De mensibus*, 3, 10 (45.18–20, 46.5–7, 15–19, 47.10–12); *Anecdota Graeca*, ed. Cramer, 1, 323.2 ff.

[233] Clement of Alexandria, *Stromata*, 6, 11, 84, 7, ed. Stählin, 2, 474.2 f.; John of Damascus,

day of the month or of [the cycle] of the moon: *διχομηνία: τοῦ μηνὸς τὸ ἥμισυ. καὶ διχομηνιαία, πεντεκαιδεκαταία τοῦ μηνὸς ἢ τῆς σελήνης.*[234] According to a Christian tradition, supported by Severianus, Cosmas Indicopleustes, John of Damascus, Michael Psellus, the Anonymus Christianus of Cramer, and Isaac Argyrus, when the moon was created it was 15 days old and full (*πεπληρωμένη, τελεία, πεντεκαιδεκαταία*).[235]

The other principal termini, *νουμηνία* for the day of the new moon, the first of the month, and *ἕνη καὶ νέα* for the last day of the old month (combining the last day of the old moon, and the first of the new), occur frequently in all periods of Greek literature. For *νουμηνία* Pletho could have turned to the best-known classical authors, as well as to Geminus, the medieval lexicographers, Eustathius,[236] and his own contemporary, Cyriac of Ancona, who paid him a visit at Mistra in the year 1447, and who uses it as a synonym for *καλένδαι*.[237] Very much the same sources attest *ἕνη καὶ νέα* for the last day of the month.[238]

One slight departure from the classical norm is Pletho's use of *ἕνη* for the twenty-ninth day of a full month, which Theodore of Gaza ascribes to

De fide orthodoxa, 2, 7 (21), MPG, 94, 896D; Michael Psellus, *περὶ τῆς κινήσεως τοῦ χρόνου, τῶν κύκλων τοῦ ἡλίου καὶ τῆς σελήνης. . . .* , ed. G. Redl, *Byzantion*, 4 (1927–8), 217.8 ff., 218.4 ff.; Isaac Argyrus, MPG, 19, 1293B. It was understood, of course, that the moon actually became full in a fraction less than 15 days: in 14¾ days, say John of Damascus, *op. cit.*, MPG, 94, 897A, and Michael Psellus, *loc. cit.*, 222 (last paragr.); in 14½ days, says Tzetzes on Hesiod, *Works and Days*, 771 (423.4 ff.). Less commonly, the fourteenth of the lunar month is stated to be the day of the full moon: CCAG, 4 (see n. 178a *supra*), 143.24; CCAG, 11.2, ed. C. O. Zuretti (Brussels, 1934), 174.9 f.; Arthur Mentz, *Beiträge zur Osterfestberechnung bei den Byzantinern*, 63–6; 'Ananias of Shirak,' transl. F. C. Conybeare, BZ, 6 (1897), 575. Cf. *Etymologicon magnum*, *s.v.* *διχόμηνος*.

[234] *S.v.* *διχομηνία*.

[235] Cosmas, *Topographia Christiana*, 10, MPG, 88, 425D (= ed. E. O. Winstedt [Cambridge, Eng., 1909], 307.11–16), which is taken from Severianus, *In mundi creationem*, *Oratio* 3, MPG, 56, 449D; John of Damascus, *op. cit.*, MPG, 94, 896D; Anonymus Christianus, ed. Cramer, *Anecdota Graeca*, 1, 378.26–379.10; Michael Psellus, *loc. cit.*; Isaac Argyrus, MPG, 19, 1293B. For the view that the moon was 14 days old at creation, see M. Blastares, MPG, 145, 73BC.

[236] Lexica, *s.v.* (or *νεομηνία*); Eustathius, *Opuscula*, 315.50 ff., 317.34–7, 70–77; Photius, *Lexicon*, *s.v.* *Μουνυχιών*; A. Mommsen, *Chronologie*, 80 ff.

[237] Ed. Lampros, *Παλαιολόγεια καὶ Πελοποννησιακά*, 4, 96.18. For the date see the text edited by Remigio Sabbadini, 'Ciriaco d' Ancona e la sua descrizione autografa del Peloponneso,' *Miscellanea Ceriani* (Milan, 1910), 203. On the use of *νουμηνία* for the first day of the solar month, see nn. 314 f. *infra*.

[238] Lexica, etc., *s.v.*; Diogenes Laertius, 1, 58 f.; Proclus, *In Timaeum*, 1, 81.13 ff.; *idem*, on Hesiod, *Works and Days*, 408 (260.18 ff.); Moschopulus, *ibid.*, 261.1 ff.; Eustathius, *Commentarii ad Homeri Odysseam*, 2, 203.42 ff. (1866.10 ff.); scholia on Aristophanes, *Clouds*, 1131, 1134, 1179–98 (125.49–126.53, 127.44 ff., 445 f.); scholium on Plato, *Laws*, 8, 849B (338); Theodore of Gaza, *De mensibus*, MPG, 19, 1201D.

Hesiod, *Works and Days*, 768 (770), takes *ἕνη* to be the first of the month; see the medieval exegetes on Hesiod, 260.20 f., 31 f., 419.6 ff., 421.1 ff., 8 ff., 15 ff., 448.11 ff. Cf. Tzetzes, *ibid.*, 416.25 f.; ps.-Zonaras, *Lexicon*, 1, 728, *s.v.* *ἐνηφι*.

Pletho's desire to create another holiday.[239] Pletho probably felt that if ἕνη καὶ νέα (the old and new) was appropriate for the last day of the lunar month, on which the moon terminates one cycle and begins a new one, ἕνη (old), which was used occasionally as a synonym for τριακάς (thirtieth day of the month), would be equally suitable for the last full day of the waning moon. Theodore of Gaza himself goes so far as to sanction the use of ἕνη for the last day of the solar month.[240]

Though Pletho designates his fifteenth day as διχομηνία, a term which probably arose in connection with the bifurcated lunar calendar of early times,[241] he also adopts elements of the triadic division of the month (three decades of ten days each). This arrangement, found as early as Hesiod's *Works and Days*,[242] which, as we have seen, also preserves vestiges of the bipartite month,[243] is common in the inscriptions,[244] appears in the lexica and scholiasts,[245] and was also well understood by Theodore of Gaza in 1470.[246]

From the ancient triadic system, Pletho derived the nomenclature which he applies to each of his four weeks. His designation for the first week, μηνὸς ἱσταμένου, was generally used in ancient times for the first decade;[247] and his use of μηνὸς μεσοῦντος, though less common, is attested for the second decade not only by Hesiod and Proclus [248] from among his favorite authorities, but also by the *Onomasticon* of Pollux,[249] which Theodore of Gaza cites as Pletho's source.[250] The phrases Pletho chose for the third and fourth weeks, μηνὸς φθίνοντος and μηνὸς ἀπιόντος, respectively, were synonymous in ancient times, and were both used (like ἐξιόντος, λήγοντος, etc.) to

[239] MPG, 19, 1209C; cf. 1208A-C.

[240] Almost all of the texts cited *supra* for ἕνη καὶ νέα make a point of defining ἕνη as 'old.' Note also scholia on Aristophanes, *Acharnians*, 172 (7.36-8); J. Lydus, *De mensibus*, 3, 10 (44.16-45.2); Suidas, 2, 281.20 f., 282.5 f., 15 f.; Theodore of Gaza, MPG, 19, 1201D.

[241] See notes 221-3 *supra*.

[242] vv. 770 ff.; for analysis, see Kubitschek, *Grundriss*, 171-3; Ginzel, *Handbuch*, 2, 315-25; Schmidt-Rühl, *Handbuch*, 67; A. Mommsen, *Chronologie*, 80-116.

[243] v. 780; cf. Nilsson, ARW, 14 (1911), 432 f. See nn. 222 f., *supra*.

[244] See the passages collected by A. Mommsen, *loc. cit.* (n. 236 *supra*); Dinsmoor, *op. cit.*; B. D. Meritt, *The Athenian calendar in the fifth century* (Cambridge, Mass., 1928), *passim*; W. K. Pritchett and B. D. Meritt, *Chronology of ancient Athens* (*ibid.*, 1940), *passim*; etc.

[245] In addition to texts cited in notes 236, 238, 244, 253, see Suidas, *s.v.* ἕνη καὶ νέα (2, 281.27-282.3); *Anecdota Graeca*, ed. Bekker, 1, 280.30-281.15; Tzetzes on Hesiod, *Works and Days*, 771 (423.7 ff.); *Lexicon rhetoricum Cantabrigiense*, 340.12-341.4. Cf. Ernst Bischoff, 'Beiträge zur Kenntniss nicht- attischer Tagesnamen,' *Leipziger Studien zur classischen Philologie*, 10 (1887), 299-308.

[246] MPG, 19, 1201BC.

[247] A. Mommsen, *loc. cit.*

[248] Hesiod, *Works and Days*, 794 f. (τετρὰς μέσση), 819 f., 782, 805, 810; Proclus on *idem*, 780 (430.4 f.).

[249] 1, 63.

[250] MPG, 19, 1201B.

describe the third decade.[251] Analyses of the ancient month, with its three decades, were so numerous and so unambiguous, as to preclude the possibility of error or misunderstanding on Pletho's part. He merely took advantage of the synonyms to adopt an ancient appellative formula for each of his four weeks.

Another feature of Pletho's system which requires explanation is the regressive counting of days in the second and fourth weeks of his month. This device, which is common for the last decade of the month in both literary and epigraphical monuments,[252] is attributed to Solon by Plutarch,[253] as we have seen, and by Proclus in his commentary upon the *Timaeus* of Plato.[254] The backward count in the last decade of the month is found also in a number of late ἡμερολόγια, preserved in manuscripts of the ninth and tenth centuries.[255]

In Pletho's calendar ὀγδόη φθίνοντος stands for what we should call the twenty-second of the month. In the backward count, this day (ὀγδόη ἀπιόντος, ὀγδόη φθίνοντος, and the like) corresponded to the twenty-third in a full month. Some maintain that it is always to be taken as the twenty-third, whether the month be full or hollow. On the basis of a study of the inscriptions, however, Meritt has come to the conclusion that the ὀγδόη φθίνοντος was the equivalent of our twenty-third in a full month, and of our twenty-second in a hollow month.[256] Pletho's η′ φθίνοντος, which always holds the place of our twenty-second, accords well with Meritt's theory and, given the elements and requirements of Pletho's calendar, does not depart from the ancient Greek practice in any major particular.

Since the lunar month contains approximately 29.5 days, it is necessary to alternate months of 30 and 29 days in order to avoid the inconvenience of reckoning months with a fractional number of days. This is the same ex-

[251] Kubitschek, *Grundriss*, 171; Ginzel, *Handbuch*, 2, 324; Schmidt-Rühl, *Handbuch*, 147 ff.; Bischoff, *loc. cit.* (in n. 245), 301 f.; A. Mommsen, *Chronologie*, 106 ff.

[252] Scholiast on *Clouds*, 1131 (126.3–36). See in addition to the passages cited in n. 245 f. *supra*: Aristophanes, *Clouds*, 1131 ff., quoted by Theodore of Gaza, MPG, 19, 1201CD; Plutarch, *Alexander*, 76, 2–4; Proclus, on Hesiod, *Works and Days*, 815 (443.23 ff.); Eustathius, *Opuscula*, 317.26–37; Ulpian on Demosthenes, *De falsa legatione*, ed. W. S. Dobson, *Demosthenis et Aeschinis quae exstant omnia*, 6 (London, 1828), 128, col. 1. See n. 256 *infra*.

[253] *Supra*, n. 222.

[254] 1, 81.13 ff.

[255] Ed. W. Kubitschek, 'Die Kalenderbücher von Florenz, Rom, u. Leyden,' *Denkschriften d. kaiserl. Akad. d. Wiss.*, Philos.-hist. Kl., 57 (Vienna, 1915), 3. Abh., 83 f., 85 f., columns *i* and *l* of the calendars of the even-numbered pages (2–24), and column *n* in pp. 28–38.

[256] B. D. Meritt, 'Greek inscriptions,' *Hesperia*, 4 (1935), 532 ff., *n.b.* 535; Pritchett-Neugebauer, *Calendars of Athens*, 23 ff. Schmidt-Rühl, *Handbuch*, 153 ff.; A. Mommsen, *Chronologie*, 120–22. *Contra*, Kubitschek, *Grundriss*, 168–72; cf. Ginzel, *Handbuch*, 2, 322 f., 325–30.

pedient adopted by the Jews, the Muslims, and other peoples who have used the lunar month.[257] The best treatment of the question in the Greek sources is that of Geminus, who says:

> The exact length of the month . . . is 29½ days minus ⅓₃rd of a day. But for civil reckoning this is taken to be roughly 29½ days, so that two months contain 59 days. Accordingly, since two lunar months contain 59 days, the civil months are alternately full and hollow. Hence, the lunar year comes to 354 days. For if we multiply the days of the month, 29½ in number, by 12, the lunar year is found to be 354 days long.[258]

The 29½-day lunar month was of course well known in the Middle Ages,[259] and the alternation of 30-day months and 29-day months, implied by Aristotle's story of Memnon in the *Oeconomica*,[260] is directly mentioned by Proclus and Moschopulus in their scholia on Hesiod's *Works and Days*, as well as by Theodore of Gaza in his *De mensibus*, who uses the terms πλήρεις and κοῖλοι.[261] It has been argued that the Athenian archons departed from the fixed pattern of alternation between 30- and 29-day months that the rigid lunar calendar requires, because they began the month on the first appearance of the sickle of the young moon, which is only an approximate indication of the date of the conjunction of the sun and moon.[262] However this may be, Pletho insists (see n. 23 *supra*) on accurate astronomical computation and specifically states that his new month should begin with the first midnight after conjunction. It may be assumed, therefore, that he followed the practice of the Athenian astronomers (in this case [Meton], Euctemon, Philip, and Callippus; see n. 80 *supra*), who regularly alternated 30- and 29-day months, as Geminus says, except occasionally, when, on account of intercalation, two full months (of 30 days each) came in succession.

[257] Ginzel, *Handbuch*, 1, 63, 254; 2, 85 f.; R. A. Parker and W. H. Dubberstein, *Babylonian chronology* (2d ed., Chicago, 1946).

[258] *Eisagoge*, 8, 3–5 (100.16–102.1): ἔστι δὲ ὁ μὲν ἀκριβὴς μηνιαῖος χρόνος . . . ἡμερῶν κθ′ ∠″ λγ^{ου}, ὁ δὲ πρὸς τὴν πολιτικὴν ἀγωγὴν ὁλοσχερέστερον λαμβανόμενος ἡμερῶν κθ′ ∠″, ὥστε τὴν δίμηνον γενέσθαι ἡμερῶν νθ′. ὅθεν διὰ ταύτην τὴν αἰτίαν οἱ κατὰ πόλιν μῆνες ἐναλλὰξ ἄγονται πλήρεις καὶ κοῖλοι διὰ τὸ τὴν ⟨κατὰ⟩ σελήνην δίμηνον ἡμερῶν εἶναι νθ′. ἐκ δὲ τούτων συνάγεται ὁ κατὰ σελήνην ἐνιαυτὸς ἡμερῶν τνδ′. ἐὰν γὰρ τὰς τοῦ μηνὸς ἡμέρας τὰς κθ′ ∠″ δωδεκάκις πολυπλασιάσωμεν, ἀποτελεσθήσονται ἡμέραι αἱ τοῦ κατὰ σελήνην ἐνιαυτοῦ τνδ′. ἄλλος γάρ ἐστι καθ' ἥλιον ἐνιαυτὸς καὶ ἄλλος κατὰ σελήνην.

[259] Cf. the texts cited in notes 232 ff. *supra*.

[260] 2, 1351b.11 ff. with annotations of the various editors.

[261] 415.22 ff., 417.21 ff.; cf. 418.5 ff. (Tzetzes); MPG, 19, 1185C, 1209B.

[262] Pritchett-Neugebauer, *Calendars of Athens*, 5 ff., 12–14. Geminus, *Eisagoge*, 8, 52 (120, 12–14): ἐν δὲ τοῖς σλε′ μησὶ κοίλους ἔταξαν ρι′, πλήρεις δὲ ρκε′, ὥστε μὴ ἄγεσθαι ἕνα καὶ ἕνα κοῖλον καὶ πλήρη, ἀλλὰ καὶ δύο ποτὲ κατὰ τὸ ἑξῆς πλήρεις.

XI. BEGINNING OF THE DAY

Although Pletho, as we have seen, begins his day at midnight,[263] he makes some use also of two other terminal points, morning and evening, neither of which, from the liturgical point of view, need necessarily be regarded as inconsistent with the midnight reckoning. In one passage he designates morning as the time for the recitation of the first of his three daily prayers,[264] and in another, he prescribes that the singing of hymns for each of his *ἱερομηνίαι* (holidays) begin in the evening of the day preceding the holiday (*ἀρχομένων τε ἑκάστων* [*sc.* *τῶν ἱερῶν ὕμνων*] *ἀπὸ μὲν τῆς πρὸ τῆς οἰκείας ἱερομηνίας ἑσπέρας*) and end in the afternoon of the holiday itself (*τελευτώντων δ' ἐς τὴν τῆς ἱερομηνίας δείλην*), the evening before the holiday ('the vigil') apparently being regarded, for the sake of the liturgy, as belonging to the following day.[265]

All three of these systems of calculation can be illustrated from Byzantine texts. John Lydus in the *De mensibus* says that the natural day begins with sunrise; but he notes in commenting upon the chronological conventions of ancient times, that some peoples, like the Athenians and the Hebrews, reckoned the day from sunset to sunset, and that the Romans, who at first counted nothing but the portion of the day included between sunrise and sunset, subsequently measured the day from midnight to midnight.[266] Theodore of Gaza also mentions these three conventions for the beginning of the day, noting that for the most part his contemporaries began the day at sunrise.[267]

In formal chronology, however, midnight and sunset were the principal Byzantine termini, and the latter of these was adopted by the Byzantine Church as the beginning of the liturgical day.[268] Since there was no pagan

[263] *Supra*, p. 189.

[264] Alexandre, 228.

[265] *Ibid.*, 236–8.

[266] 2, 2 (18.11–20.12). Cf. Franz Cumont, 'Lydus et Anastase le Sinaïte,' BZ, 30 (1929–30), 31 f.

[267] *De mensibus*, MPG, 19, 1213D–1216B; cf. the *Anecdota Graeca*, ed. Cramer, 1, 381.12 ff. Bilfinger, *Der bürgerliche Tag*, maintains that in ancient Greek popular usage the day was regarded as beginning in the morning. This view, though opposed by Unger, has been indorsed by Kubitschek, *Grundriss*, 186, and Nilsson, *Entstehung*, 12 ff. Cf. Ginzel, *Handbuch*, 2, 297–303; Arthur Mentz, 'Zur byzantinischen Chronologie,' BZ, 17 (1908), 475 f.; Theodosius, *De habitationibus*, scholium 51, on p. 40, 6: *Νυκτὸς καὶ ἡμέρας χρόνος ἐστίν, ὅταν ἀπὸ ἀνατολῆς ὁ ἥλιος ἐπὶ τὴν ἀνατολὴν πάλιν φθάσῃ*, ed. Fecht (see n. 80 *supra*), 52.9 f.; cf. *idem*, *De diebus et noctibus*, 1, *ibid.*, 54.5 f.

[268] See the texts collected by Bilfinger, *op. cit.*, 236 f., 246 ff.; cf. Theodore of Gaza, *loc. cit.* See also Theodore Balsamon (d. *ca.* 1193), MPG, 137, 821B–824BCD (Bals., Zonaras, Aristenus on can. 90, In Trullo); Matthew Blastares (*ca.* 1335), *Syntagma alphabeticum*, H, 3, MPG, 144, 1337D.

Greek counterpart for the ceremonious observance of the vigil on the night before the beginning of a feast,[269] it seems probable that Byzantine ecclesiastical usage, rather than the Athenian custom of reckoning the day from sunset to sunset, was responsible for Pletho's choice of the evening as the time for the commencement of the celebration in hymns of the *ἱερομηνία*, which, according to the scheme outlined in his chapter on the calendar, would not come into being until midnight.

On the other hand, in making midnight the dividing-line between one day and the next, he was following the guidance of the Byzantine codes of law. Midnight is described as the starting point of the ancient Roman day by a number of authors, and was so used in the Roman Church.[270] This terminus had acquired legal sanction as early as the second century, in the treatise *Ad Sabinum* of the jurist Paulus, cited in the *Digest* of Justinian.[271] Thence this provision passed into an anonymous manual of the early seventh century on legal units of time (*περὶ χρόνων προθεσμίας ἀπὸ ῥοπῆς ἕως ἑκατὸν ἐνιαυτῶν*), the second chapter of which (*περὶ ὥρας*) defines the limits of the day as extending from the seventh hour of one night to the sixth of the next,[272] and the third chapter of which (*περὶ ἡμέρας*) states that 'the day is reckoned from midnight to midnight' (*ἡ ἡμέρα ὁρίζεται ἀπὸ νυκτὸς μέσης ἕως μέσης νυκτός*).[273] This definition, put more precisely in the *Basilica* (tenth century), which states that the day extends from the seventh hour of one night up to, and including the whole of, the sixth hour of the following night,[274] is repeated also in one of the appendices attached to the *Πρόχειρον*

[269] So Nilsson, *Entstehung*, 16 f.

[270] See Bilfinger, *op. cit.*, 10 ff., 203 f., 262 f., 285, with texts and discussion.

[271] *Digesta*, 2, 12, 8, edd. T. Mommsen, P. Krueger, *Corpus Iuris Civilis*, 1 (Berlin, 1928). 54 f.: More Romano dies a media nocte incipit et sequentis noctis media parte finitur. itaque quidquid in his viginti quattuor horis, id est duabus dimidiatis noctibus et luce media, actum est, perinde est, quasi quavis hora lucis actum esset. Cf. *Digesta*, 28, 1, 5; 40, 1, 1; 41, 3, 6 & 7 (all from Ulpian), and the exegesis of Gustav Bilfinger, *Die antiken Stundenangaben* (Stuttgart, 1888), 33 ff., who does not mention the texts discussed *infra*.

[272] *Αἱ ῥοπαί, oder die Schrift über die Zeitabschnitte . . .* , ed. C. E. Zachariae (Heidelberg, 1836), 122; reprinted in J. and P. Zepos, *Jus Graecoromanum*, 3 (Athens, 1931), 278: *ὅτι ἡ ἡμέρα ἀπὸ ἑβδόμης ὥρας τῆς νυκτὸς ἄρχεται καὶ τελευτᾷ εἰς τὴν ϛ′ ὥραν τῆς ἐπιούσης νυκτός, ὥστε καὶ τὸ πραττόμενον ἐν μιᾷ τούτων τῶν κδ′ ὡρῶν ἐν τῇ αὐτῇ ἡμέρᾳ δοκεῖ γενέσθαι.* On the date see Petropoulos, *op. cit.* (in n. 274 *infra*), 225–7; K. E. Zachariae von Lingenthal, *Geschichte d. griechisch-römischen Rechts*, (3rd ed., 1892), 12.

[273] *Loc. cit.*

[274] *Basilica*, 7, 17, 8, ed. Karl W. E. Heimbach, 1 (Leipzig, 1833), 314: *ἡ ἡμέρα ἀπὸ ἑβδόμης ὥρας τῆς νυκτὸς ἕως πληρουμένης τῆς ἕκτης ὥρας τῆς ἑπομένης νυκτὸς ὁρίζεται, καὶ τὸ γινόμενον ἐν οἱᾳδήποτε ὥρᾳ τῶν εἴκοσι τεσσάρων ὡρῶν ἐν φωτὶ δοκεῖ γίνεσθαι.* Bilfinger, *op. cit.* (in n. 271), 33 ff., interprets the 'sixth hour of the night' as the moment of midnight, coinciding with the end of one day and the beginning of the next, the sixth hour being the first hour of the new day. According to this passage, however, which Bilfinger does not use, the new day begins *after* the expiration of the sixth hour, with the first instant of the seventh. Later and fuller than Heim-

Νόμων (Manual of Laws) of Constantine Harmenopulus (1345),[275] and seems to have held sway in the law codes, in one form or other, throughout the Middle Ages.

Pletho's choice of midnight may have been affected also by the discussion of the beginning of the day in the *Aetia Romana* of Plutarch, who, after surveying all the possibilities and hesitating between noon and midnight, finally decides in favor of midnight.[276] Astronomically, it seems, the decision in antiquity lay between noon and midnight; and Claudius Ptolemy was of the opinion that either noon or midnight would serve equally well as the basis of the astronomical day.[277]

XII. SACRED DAYS

Pletho's month and his use of the seven-day week are, as we have seen, rigidly lunar, and reflect the lunar doctrine of Aristotle, Theophrastus, Geminus, and the scholiast on Aratus discussed in section X, 1 *supra*. This aspect of his calendar, which is indisputably of pagan origin, determined the pattern of his month (see p. 219 *supra*) and explains the arrangement of his holidays in a fixed, invariable, and constantly recurring scheme, in which each one coincides with an important phase of the moon. The Christian observance of Sunday is, perhaps, partially analogous and may well have been the inspiration for the days reserved by Pletho for divine service, five out of six of which (see *infra*) superficially resemble Sunday in standing at the beginning of what would correspond to the Christian week, although they differ radically from Sunday, which does not fall on the same dates every month, in that they are invariable in date from month to month. Moreover, as it is the purpose of the present section to show, each of Pletho's festal days, considered individually, can be supported by pagan heortological precedents, which are of importance here less as actual models for the cult days of the *Nomoi* than as examples of the coincidence of the cardinal phases of the lunar month with days marked for special commemoration in the

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bach's edition of the *Basilica* is that of I. D. Zepos, Βασιλικά, 1 (Athens, 1896), 350, which has been completely neglected by scholars and is rarely cited except in Greece. On general principles of time reckoning in Roman Law, see Georgios A. Petropoulos, Ἱστορία καὶ εἰσηγήσεις τοῦ Ῥωμαϊκοῦ Δικαίου (Athens, 1944), 532–4, 982 f., which did not reach me until after this paragraph was in proof.

[275] *Manuale legum sive Hexabiblos cum appendicibus et legibus agrariis*, ed. Gustav E. Heimbach (Leipzig, 1851), 800, 33: ὅτι ἡ ἡμέρα ἀπὸ τῆς ἑβδόμης ὥρας τῆς νυκτὸς ἄρχεται καὶ τελευτᾷ εἰς τὴν ἕκτην ὥραν τῆς ἐπιούσης νυκτός, ὥστε καὶ τὸ πραττόμενον ἐν μιᾷ τούτων τῶν κδ′ ὡρῶν ἐν τῇ αὐτῇ ἡμέρᾳ δοκεῖ γίνεσθαι.

[276] 84 (284C–F).

[277] *Mathematike Syntaxis*, 3, 9 (1, 261.1 ff., 262.10 ff.).

ancient religious calendar, although it is not without interest that every one of the days treated *infra* is mentioned by authors Pletho had read and studied.

The regular monthly ἱερομηνίαι (holidays) instituted by Pletho, as we learn from the thirty-sixth chapter of the third book of the *Nomoi*, were the first (νουμηνία), the eighth, διχομηνία (the fifteenth), the eighth before the end of the month (the twenty-second), ἕνη (the twenty-ninth in a full month), and ἕνη καὶ νέα (the thirtieth in a full month or the twenty-ninth in a hollow month). Hollow months, lacking ἕνη as they did, had only five holidays. The first and last months of the year, on the other hand, had two additional ἱερομηνίαι each, falling on what we should call the second and third days of the first month, and the 27th and 28th (the 3rd and 2nd days from the end of the month) of the last month of the year.[278] The word ἱερομηνία, which in ancient times denoted a festival of varying duration, often occurs in classical texts in the sense of 'holy day' and is so defined in the *Etymologicon magnum* (ἱερὰ ἑορτὴ κατὰ μῆνα, ἡ ἐν τῷ μηνὶ ἱερὰ ἡμέρα).[279] On ἱερομηνίαι in antiquity truce was observed, and all the official business of the state was suspended.[280] Some of the numerous modes of merrymaking customary on the pagan holidays (οὗτος . . . Ἑλληνικῆς ἱερομηνίας ὁ νόμος) are listed and condemned by Gregory of Nazianzus in his second oration against Julian.[281]

The principal and most conspicuous feast-days of ancient Greece were celebrated annually. They did not in general recur on the same day every month [282] as do the ἱερομηνίαι of Pletho's calendar. Nevertheless, there were also a number of monthly observances, usually less elaborate than the annual festivals and restricted for the most part to simple ceremonies connected

[278] Alexandre, 236.16 ff., 238.1–3, 21–240.3.

[279] *s.v.*; *Anecdota Graeca*, ed. L. Bachmann, 1 (Leipzig, 1828), 260.21, and the lexica of Harpocration, Hesychius, Photius, and Suidas (*s.v.*) define ἱερομηνία in the same terms except that they omit ἡ — ἡμέρα. Cf. Suidas, *s.v.*: ἱερομηνίαι: ἑορτώδεις ἡμέραι ἱερομηνίαι καλοῦνται. See also Thucydides, 3, 56, 2; 3, 65, 1; and the scholiast on 5, 54, 2, ed. F. Haasius, *Thucydides* (Paris, 1840), pt. 2, 96.3 f.; Demosthenes, 21, 33–35 (525); 24, 29–32 (709 f.); Pindar, *Nemean Odes*, 3.2 (4), with scholium, ed. A. B. Drachmann, *Scholia vetera in Pindari Carmina*, 3 (Leipzig, 1927), 42.10–22; Nilsson, *Entstehung*, 32; Paul Stengel, PW, 8 (1913), 1489 f. The word ἱερομηνία is not restricted to pagan writers, and can be found also in specifically Christian contexts. Theodore of Gaza uses it of Sunday: MPG, 19, 1209A.

[280] See the passages from Thucydides and Demosthenes cited in the previous notes; *n.b.* Demosthenes, 24, 29–32 (709 f.); cf. *Corpus inscriptionum Graecarum*, ed. A. Boeckhius, 2 (Berlin, 1843), 1131, no. 3641b.15 ff.; Plato, *Laws*, 2, 653D.

[281] MPG, 35, 708C–712A.

[282] Deubner, *Attische Feste*: Festkalender at the end of the book, following p. [268], preceding the plates; Nilsson, *Entstehung*, 32; *idem*, ARW, 14 (1911), 441 f.; August Mommsen, *Feste d. Stadt Athen im Altertum* (Leipzig, 1898), 5–30; *idem*, *Heortologie* (Leipzig, 1864), tables facing pp. 93 and 96.

with temple service and house cult.[283] Prominent among these were the birthdays of the gods.[284] As the scholiast on the *Plutus* of Aristophanes says, 'apart from the festivals, the Athenians dedicate a number of holy days to the gods, as for example, *νουμηνία* and the seventh to Apollo, the fourth to Hermes, and the eighth to Theseus . . .'[285] In keeping with the religious calendar of the classical period, which was predominantly lunar, many *ἱερομηνίαι* fell on the days of the principal lunar phases – on new moon, on full moon, and on the days just preceding and following the new moon;[286] and we have already seen that Aristotle, Theophrastus, Aratus (plus scholia), and other pagans called special attention to these days and to the days (the eighth and the twenty-second) which fall midway between them.

1. Νουμηνία

The first day of the month (*νουμηνία*), said by Plutarch in his *De vitando aere alieno* to be the holiest of all (*ἱερωτάτην ἡμερῶν οὖσαν*),[287] Pletho dedicated to Zeus, the most august and most important figure in his pantheon. According to Hesiod, this day, like the fourth, the seventh, and the thirtieth of the month, was sacred to Zeus. Porphyry in his life of Plotinus refers to a certain Amelius who performed sacrifice on *νουμηνία*, and Proclus, who is described by Marinus[288] as having been especially zealous in honoring this day (*νουμηνίας λαμπρῶς ἐπετέλει καὶ ἱεροπρεπῶς*), says in his commentary upon the *Works and Days*, that it had special significance as the birthday of the month and because Plato had pronounced every beginning to be divine.[289] Moschopulus repeats these observations of Proclus and explains that Hesiod's description of the first as one of the days that come from Zeus

[283] Deubner, *op. cit.*, 39, 149, 236 n. 3; Nilsson, *Entstehung*, 31 f., 36; *idem*, ARW, 14 (1911), 439 f.

[284] Wilhelm Schmidt, *Geburtstag im Altertum*, RGVV, 7.1 (Giessen, 1908), 12 ff.

[285] On v. 1126 (381.52–382.1) = W. G. Rutherford, *Scholia Aristophanica*, 1 (London, 1896), 112: *ἔξω τῶν ἑορτῶν ἱεραί τινες τοῦ μηνὸς ἡμέραι νομίζονται Ἀθήνησι θεοῖς τισιν, οἷον νουμηνία καὶ ἑβδόμη Ἀπόλλωνι, καὶ τετρὰς Ἑρμῇ καὶ ὀγδόη Θησεῖ*. Cf. the distinction made by Porphyry between monthly sacrifices on *νουμηνία* and the annual *θυσίαι δημοτελεῖς*, *De abstinentia*, 2, 16 (146.7 ff., 11 f.); Nilsson, *Entstehung*, 33 f.

[286] Nilsson, *Entstehung*, 31 f., 36–8. I owe much to this succinct article of Nilsson, whence many of the texts cited in notes 294–304 and 311–316 *infra* are derived.

[287] 2 (828A); the day of the new moon is greeted with general rejoicing among primitive peoples: Hutton Webster, *Rest days* (N. Y., 1916), 140 ff.; J. G. Frazer, *Adonis, Attis, Osiris*, 2 (3rd ed., London, 1914), 141–50.

[288] Alexandre, 44–56, 92 ff., 132 ff., and *passim*. Hesiod, *Works and Days*, 765–70; Marinus, *Vita Procli*, 19 (33.20 f.); Porphyry, *De vita Plotini*, 10, ed. Creuzer, *Plotini opera omnia*, 1 (cited in n. 6 *supra*), lxii.4 f.

[289] On *Works and Days*, 765–70 (n.b. 419.16 ff.: *ἡ μὲν οὖν πρώτη, ἡ καὶ ἕνη ῥηθεῖσα* [see n. 238 *ad fin.* on *ἕνη* as the first of the month], *ὡς ἀρχή, θεῖόν ἐστι, καὶ γὰρ πᾶσαν ἀρχὴν φησι Πλάτων εἶναι θείαν, καὶ γενέθλιος αὐτοῦ καλεῖται τοῦ μηνός*). Cf. Ps.-Dionysius Halicarnassus, *Ars rhetorica*,

(ἤματα δ' ἐκ Διόθεν) means that it was an auspicious day.[290] The scholiast on the *Clouds* of Aristophanes knew it as a day that had been set aside for the worship of Zeus (καὶ γὰρ ἐν τῇ πρώτῃ τεταγμένον ἦν τὸν Δία τιμᾶν).[291] More prominent than Zeus on νουμηνία, however, was Apollo Νουμήνιος;[292] and several other divinities (Artemis Νουμηνία,[293] Hera,[294] Hermes, Hecate,[295] as well as the gods in general)[296] were also worshipped on this day. With the festivities on the first of the month were associated fairs[297] (at which the sale of slaves was so prominent a feature that slaves were often named Νουμήνιος),[298] banquets (participants in which sometimes formed guilds and called themselves Νουμηνιασταί),[299] the purification and coronation of

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3, 1: εἰ μὲν τῇ νουμηνίᾳ, ὅτι ἀρχὴ τοῦ μηνάς, ἀρχὴ δὲ κράτιστον, καὶ ἐξ ἀρχῆς τὰ πάντα· καὶ ὅτι ἥμισυ τοῦ παντός, ἢ τὸ πᾶν κατὰ τὸν Πλάτωνα. See Plato, *Republic*, 2, 377A; *Laws*, 6, 753E, 775E. See n. 361 *infra*.

[290] *Loc. cit.* (421.15 ff.: πρῶτον ἡ ἕνη ἐστί, δηλονότι ἡμέρα ἀπὸ τοῦ Διός, τουτέστιν ἀγαθή, ἤγουν ἡ πρώτη τοῦ μηνός, ἡ καὶ νουμηνία). Cf. *Vita Arati*, MPG, 19, 1161AB, 1164A–C; Aratus, *Phaenomena*, 1: ἐκ Διὸς ἀρχώμεσθα, ed. E. Maass (Berlin, 1893), 3.1; scholia, ed. Maass, 81.22 ff., 82.1–83.29, 334.1–335.6; Pindar, *Nemean Odes*, 2.3, 5.25.

[291] On v. 616 (111.20 f.).

[292] Schmidt, *op. cit.* (in n. 284), 88 f.; Herodotus, 6, 57; Deubner, *op. cit.*, 202 f.; Nilsson, *Entstehung*, 34 f., 37; *idem*, *Geschichte d. griechischen Religion*, 1, *Bis zur griechischen Weltherrschaft* (*Handb. d. Altertumswiss.*, ed. Walter Otto, 5. Abt., 2. Teil, 1 [Munich, 1941], 529, 611).

[293] T. Homolle, 'Comptes et inventaires des temples déliens en l' année 279,' BCH, 14 (1890), 492; M. P. Nilsson, *Griechische Feste von religiöser Bedeutung mit ausschluss d. attischen* (Leipzig, 1906), 149.

[294] *Geographi Graeci minores*, ed. Müller, 2 (Paris, 1882), 23, fragment 9, with which W. H. Roscher, *Über Selene u. Verwandtes* (*Studien zur griechischen mythologie u. Kulturgeschichte vom vergleichende Standpunkte*, Heft 4 [Leipzig, 1890]), 111, and *Philologus*, 57 (1898), 213 ff., combines the statement of Antiphon (Athenaeus, *Deipnosophistae*, 9, 397D) that the display of peacocks was limited to νουμηνία, and concludes that Hera was the object of cult on νουμηνία, the peacock being her sacred bird. Cf. Lydus, *De mensibus*, 3, 10 (47.6–9), 3, 11 (49.25–50.1 ff.), 3, 13 (55.5 ff.).

[295] Hermes and Hecate: Porphyry, *De abstinentia*, 2, 16 (146.5–10). Hecate: Scholiast on Aristophanes, *Plutus*, 594 (357.35 ff.); Eusebius, *Praeparatio evangelica*, 3, 11, 113C, ed. E. H. Gifford, 1 (Oxford, 1903), 150. Cf. Roscher, *Über Selene u. Verwandtes*, 110.

[296] Plutarch, *Aetia Romana*, 25 (270A): καὶ γὰρ Ἕλληνες ἐν τῇ νουμηνίᾳ τοὺς θεοὺς σεβόμενοι. FHG, 1 (Paris, 1841), 414 (No. 178); cf. Theodore Balsamon, MPG, 137, 732A: Καλάνδαι εἰσὶν αἱ πρῶται ἑκάστου μηνὸς ἡμέραι, ἐν αἷς εἴθιστο τοῖς Ἕλλησι ποιεῖν τινας τελετάς. Cf. n. 312 *infra*.

[297] Theophrastus, *Characters*, 4, 12; Aristophanes, *Wasps*, 169–71; cf. Athenaeus, *Deipnosophistae*, 9, 397D.

[298] Aristophanes, *Knights*, 43 f. (with scholia); Alciphron *Epistulae*, 3, 61 (cf. *ibid.*, 3, 38 [ἕνη καὶ νέα]); cf. Suidas, *s.v.* νουμηνία. In Delphi freedmen were required to decorate the images of their former masters on the first and seventh of the month: *Sammlung d. griechischen Dialekt-inschriften*, ed. Hermann Collitz, 2 (Göttingen, 1899), 1801.5 ff., 1807.19.

[299] Lucian, *Lexiphanes*, 6 (331); Athenaeus, *Deipnosophistae*, 12, 551F; Franz Poland, *Geschichte des griechischen Vereinswesens* (*Preisschriften*, hrsg. v. d. Fürstlich Jablonowskischen Gesellschaft zu Leipzig, 38 [1909], no. 23 d. historisch-nationalökonomischen Sektion), 64, 252 f.

the images of gods and heroes,[300] private devotions,[301] and prayers and sacrifices in behalf of individuals and the state.[302] Even in soi-disant Christian circles, among the gnostics, as we learn from the *Stromata* of Clement of Alexandria, there was cultus *κατὰ νουμηνίαν*, consisting of sacrifice, libations, banquets, and the singing of hymns, offered at Cephallenia to Epiphanes, the son of Carpocrates, the heresiarch.[302a]

In addition to these monthly observances of *νουμηνία*, there was a New Year's festival in honor of Zeus (Helios) celebrated at Rome with great pomp on the first day of January to commemorate the triumph of Zeus (Helios) over winter. This holiday, John Lydus remarks in his description in the *De mensibus*, was a Roman institution (*ἑορτὴ Ῥωμαίοις σεβασμιωτάτη*).[303] For the Greeks of classical times did not make much of New Year's day, which they regarded merely as the day on which the new magistrates assumed office (*καιρὸς τῆς εἰς τὴν ἀρχὴν εἰσόδου*).[304] But in the Roman Empire, especially during the early centuries of the Christian era, New Year's day was an important pagan holiday. Among the Greeks of this period, as we learn from the ninth oration and fifth *ἔκφρασις* of the fourth century writer, Libanius of Antioch, it was a very gay and joyous occasion.[305]

So great was the popularity of the pagan *νουμηνίαι* even in Christian circles that the clergy felt compelled to inveigh against them.[306] John Chrysostom denounced them in a homily *κατὰ τῶν παρατηρούντων τὰς νεομηνίας καὶ κατὰ τὴν πόλιν χορείας τελούντων*, in which he censured those who 'keep days and months and seasons and years' (Galatians 4:10: *ἡμέρας παρατηρεῖσθε καὶ μῆνας καὶ καιροὺς καὶ ἐνιαυτούς*), maintaining that the ob-

[300] Porphyry, *De abstinentia*, 2, 16 (146.5–10); Wilhelm Dittenberger, *Sylloge inscriptionum Graecarum* (3rd ed., Leipzig, 1915), 284.15 f. (second half of fourth century B.C.); Bekker, *Anecdota Graeca*, 1, 328.29 f. (refers to Apollo, says Nilsson, *Entstehung*, 36).

[301] Aristophanes, *Wasps*, 96; Lucian, *Icaromenippus*, 13 (767); scholiast on Aristophanes, *Plutus*, 594 (357.35–7)

[302] Demosthenes, 25, 99; *Inschriften von Priene*, ed. Hiller v. Gaertringen (Berlin, 1906), no. 108.259–61; J. von Prott et L. Ziehen, *Leges Graecorum sacrae* (Leipzig, 1896), n. 10.8, 14.17; cf. 18.2, and *passim*.

[302a] *Stromata*, 3, 2, 5, 2, ed. Stählin, 2, 197.21 ff.

[303] 4, 3 f. (66.18 ff.); Lucian, *Pseudologistes*, 8 (168 f.). Cf. Fedor Schneider, 'Über Kalendae Ianuariae u. Martiae im Mittelalter,' ARW, 20 (1920–21), 82–134, 360–410, which deals entirely with the Latin West.

[304] *Orientis Graeci inscriptiones selectae*, ed. W. Dittenberger, 2 (Leipzig, 1905), no. 458.15, quoted in Nilsson, *Entstehung*, 49 n. 6; cf. *idem*, PW, 17 (1937), 150.10–20. See in addition the passage from Plato quoted in n. 115 *supra*.

[305] Ed. R. Foerster, 1.2 (Leipzig, 1903), 393–8; 8 (Leipzig, 1915), 472–77; cf. Julian, *Misopogon*, 346B, and Ammianus Marcellinus, 23, 1, 6.

[306] A. B. Cook, *Zeus*, 2.1 (Cambridge, Eng., 1925), 375. M. P. Nilsson, 'Studien zur Vorgeschichte des Weinachtsfestes,' ARW, 19 (1916–19), 71 ff. and *passim*; Fritz Bünger, *Geschichte d. Neujahrsfeier in d. Kirche* (Berlin, 1910), 12 ff., 21 ff.; Albert Müller, 'Die Neujahrsfeier im römischen Kaiserreiche,' *Philologus*, 68 (N.F., 22, 1909), 465 f. and *passim*.

servance of sacred days was a pagan institution (*τὸ παρατηρεῖν ἡμέρας οὐ Χριστιανικῆς φιλοσοφίας, ἀλλ' Ἑλληνικῆς πλάνης εστίν*).[307] A similar attack, apparently inspired by the oration of Libanius, was made by Chrysostom's contemporary, Asterius of Amasea.[308] Nevertheless, the New Year festival received the sanction of the law codes at least as late as Patzes's *Tipoukeitos* (at the end of the eleventh century), and the distribution of largess to the people on January 1 by the newly-elected consuls, though prohibited by Valentinian and Marcian, was sanctioned by the Christian Emperor Justinian, and persisted until the time of the Emperor Leo the Wise (886–912), who abolished the consulship.[309] The Church itself was powerless against popular custom, and compromised by taking over the pagan New Year as the feast of the Circumcision (*ἡ ἑορτὴ τῆς περιτομῆς*), which is now observed annually as a major feast on the first of January.[310]

The pagan *νουμηνίαι* were condemned at the Council in Trullo in 692;[311] but Theodore Balsamon, the canonist, who died *ca.* 1193, remarks in his annotations on the sixty-second canon of this Council that the pagan New Year rites were still being celebrated in his day in rural communities at the beginning of January. In condemning these practices, he gives a number of details concerning the masquerades and mumming which apparently were popular in the twelfth century and suggests that the Christian festivals of Christmas and Epiphany (*ἑορτὴ τῶν Φώτων*) ought, under proper conditions, to make effective substitutes for the pagan New Year.[312] On the other hand, his contemporary, Eustathius, the learned bishop of Thessalonica, himself sent a *νουμηνία* gift in the form of a long letter to one of the Comneni, presumably the Emperor Manuel I. In more than six columns of closely printed

[307] MPG, 48, 955A, 956D; cf. 963 ff. Chrysostom refers specifically to the pagan new year. For astrological tracts *περὶ καλανδῶν* see CCAG, 7, ed. F. Boll (1908), 126; CCAG, 8.3, ed. F. Boudreaux (1912), 191 f. On Galatians 4:10, cf. R. Reitzenstein, *Poimandres* (Leipzig, 1904), 80 f.

[308] MPG, 40, 215–26.

[309] *Codex Justinianus*, 12, 3, 2, ed. P. Krueger, *Corpus Iuris Civilis*, 2 (Berlin, 1929), 454; Justinian, *Novellae*, 105, 2, 1, edd. R. Schoell, W. Kroll, *ibid.*, 3 (Berlin, 1928), 503 f.; Leo, *Novellae*, ed. K. E. Zachariae von Lingenthal, *Ius Graeco-Romanum*, 3 (Leipzig, 1857), 191; *Tipoukeitos*, 7, 17, edd. C. Ferrini et G. Mercati, *Studi e Testi*, 25 (Rome, 1914), 79–81. Cf. Sozomenos, *Historia ecclesiastica*, 5, 17, MPG, 67, 1268AB; Gregory of Nazianzus, *Contra Julianum*, 1, 84 f., MPG, 35, 612AC; A. Müller, *loc. cit.*, 480. See n. 370 *infra*.

[310] N. Nilles, *Kalendarium manuale utriusque ecclesiae*, 1 (Oenipotente, 1896), 33, 46 f.; A. B. Cook, *loc. cit.*; L. Duchesne, *Origines du culte chrétien* (5th ed., Paris, 1925), 290.

[311] J. D. Mansi, *Sacrorum conciliorum nova et amplissima collectio*, 11 (Florence, 1765), 973A; cf. Meursius, *Graecia feriata* in Jacobus Gronovius, *Thesaurus Graecarum antiquitatum*, 7 (Venice, 1735), 826 ff.

[312] MPG, 137, 728B ff. Very similar is Matthew Blastares (*ca.* 1335), *Syntagma alphabeticum*, Γ, 3, MPG, 144, 1264C–1265D, who remarks (1265B) thta: *ἐν μὲν οὖν ταῖς νουμηνίαις εἴθιστο καὶ Ἰουδαίοις καὶ Ἕλλησιν ἑορτάζειν καὶ γόνυ κλίνειν, ὡς τὸ μηνιαῖον διάστημα διέλθοι εὐτυχῶς*. Cf. *Acta S. Dasii*, ed. Franz Cumont, *Analecta Bollandiana*, 16 (1897), 6 f., 12.4 ff.

Greek wholly devoted to the subject of *νουμηνίαι* (and *καλάνδαι*) Eustathius descants upon the gaiety and festivity characteristic of the *νουμηνίαι*, without once referring to rival Christian *ἑορταί*, or criticizing either the holiday itself or the forms of celebration, which he describes out of the pages of Libanius, whom he specifically cites.[313]

Except for the antiquaries, however, *νουμηνία* did not in general retain its lunar connotation in the Middle Ages. As Eustathius notes in commenting upon Plutarch's lunar definition of the word, *νουμηνία* had come to mean nothing more than *Calends*, the first day of the solar month.[314] Cassius Dio uses the word in both senses, as does John Lydus,[315] and even as early as the second century pseudo-Dionysius of Halicarnassus treats *νουμηνία* as a synonym of *πανήγυρις* and *ἑορτή*,[316] a common meaning in the Byzantine period.[317] Pletho's use of *νουμηνία* was, of course, a revival of the ancient lunar institution, comparable in some respects to the rural custom mentioned by Balsamon. The consecration of the first three days of the first month of the year as *ἱερομηνίαι* is also an imitation of ancient practice, either of the Roman New Year (which according to John Lydus lasted three days)[318] or, less probably, of ancient Greek festivals like the Thesmophoria, the Apaturia, and the Anthesteria, which also occupied three days.[319]

2. EIGHTH DAY

Pletho's next *ἱερομηνία*, the eighth of the month, had in ancient times been celebrated monthly throughout the year as a day sacred to Poseidon, a god to whom Pletho accords great reverence as the eldest and mightiest

[313] *Opuscula*, 314–17; Libanius is cited on 314.84.

[314] *Ibid.*, 317.72 ff. Cf. Plutarch, *Solon*, 25, 3, and *De vitando aere alieno*, 2 (828A); Dionysius Halicarnassus, *Antiquititates Romanae*, 8, 55, 4; Balsamon, MPG, 137, 728CD.

[315] Cassius Dio, *Historia Romana*, cf. 40, 47, 1; 48, 4, 5; 51, 20, 1; 60, 5, 3; 60, 11, 6, etc. (solar) with 39, 38, 5 = Xiphilinus, 12, 30 (lunar). J. Lydus, *De ostentis* (*Nigidii Tonitruale*, 28, α′), ed. Wachsmuth, 65.17: *ἐπὶ τῆς σεληνιακῆς νουμηνίας* (cf. *ibid.*, 50.24 f., 52.9, 53.2, 19).

[316] *Ars rhetorica*, 4, 2: *ὅτι πᾶσι διὰ σπουδῆς ὁ γάμος ἐστίν, καὶ ὁ γάμος ἔοικεν πανηγύρει τινὶ καὶ νεομηνίᾳ καὶ δημοτελεῖ ἑορτῇ τῆς πόλεως.*

[317] Cf. the proverb, *ἑαυτῷ νουμηνίας κηρύττει*, which the paroemiographers interpret to mean: *ἐπὶ τῶν βουλομένων αὐτοῖς τι ἀγαθὸν γενέσθαι ἀταλαιπώρως, ἤτοι ἐπὶ τῶν ἀνέσεις ἑαυτοῖς ποριζόντων*, *Paroemiographi Graeci*, 1, 384.11–13; cf. n. 446 *infra* and Eustathius, *Opuscula*, 315.53 ff.: *καί ἐστι ταὐτὸν εἰς πράγματος φύσιν, καλάνδας τε καὶ νουμηνίας ἢ ἱερομηνίας εἰπεῖν . . . ἤγοντο μὲν οὖν πᾶσαι καλάνδαι διὰ τιμῆς, καὶ ἱεραί εἰσιν ἡμέραι, ὅτι καὶ νεομηνίαι.* In what follows, Eustathius explains that the ancient custom of celebrating the first of every month no longer prevailed in his day.

[318] *De mensibus*, 4, 8 ff. (73.16 ff.); cf. *Codex Iustinianus*, 3, 12, 6 (7), 2, ed. Krueger, *Corpus Iuris Civilis*, 2, 127 f.: Kalendarum quoque Ianuariarum consuetos dies otio manicipamus.

[319] Deubner, *Attische Feste*: See Festkalender, following p. [268 f.]; scholiast on Plato, *Timaeus*, 21B (281), with texts cited by Greene *ad loc.*

son of Zeus.[319a] We learn of Poseidon's connection with the eighth from Plutarch [320] and Proclus,[321] the former of whom adds that the eighth was also dedicated to Theseus, whose chief sacrifice took place in Athens on the eighth of Pyanepsion, and that the Athenians honored him on the eighth day of the other months, presumably because he was said to be the son of Poseidon.[322] The anniversary in honor of Poseidon was so well-known that it even made its way into a *selenodromion* (lunar astrological calendar) of the thirteenth century, in which the first entry under Ἡμέρα η' ⟨τῆς⟩ σελήνης is Ποσειδῶν ἐγεννήθη.[322a] The scholiast who mentions a Festival of the Pitchers (ἑορτὴ τῶν χοῶν) on the eighth of the month of Pyanepsion seems to have been in error,[323] but there was at least one more religious observance connected with the eighth of the month which may, perhaps, have some relevance here. This was the veneration of the god Asclepius on the eighth of the month of Elaphebolion, an important day in the religious calendar since it was the προαγών of the city Dionysia, one of the major festivals in Athens, which in the time of Demosthenes began on the ninth and lasted through the thirteenth (of Elaphebolion).[324]

3. Διχομηνία

The fifteenth (διχομηνία), the third ἱερομηνία of all of Pletho's months except the first, in which it was the fifth, was, as we have seen, the day of the full moon. The Olympic games were held at the time of the full moon,[325] and the sources connect with διχομηνία (or the fifteenth), which was said by the pseudo-Dionysius of Halicarnassus to have been sacred to Athene,[326] a

[319a] Alexandre, 46, 48, 92, 134, and *passim*.

[320] *Theseus*, 36, 3 f. A celebration in honor of Poseidon on the eighth of Poseideon is recorded in *Inscriptiones Graecae, voluminis II et III, editio minor, pars prima*, ed. J. Kirchner (Berlin, 1916), 649, no. 1367.16; for another on the eighth of Elaphebolion, see Paul Foucart, *Des associations religeuses chez les Grecs* (Paris, 1873), 223 f., no. 43. Cf. Deubner, *op. cit.*, 214 f.; Schmidt, *op. cit.* (in n. 284), 15, 34, 43, 103.

[321] On *Works and Days*, 788 (433.24 ff.); John Protospatharius, *ibid.* (455.1 ff.).

[322] *Theseus*, 36, 3 f. Cf. *ibid.*, 12, 1; scholiast on Aristophanes, *Plutus*, 627 (359.34–6); Hesychius, *s.v.* Ὀγδόδιον; Deubner, *op. cit.*, 224 ff.; Schmidt, *op. cit.* (n. 284 *supra*), 43, 87, 103; A. Mommsen, *Feste*, 5 n. 2, 288 ff., 307.

[322a] CCAG, 3 (1901), 34.1 f.

[323] On Aristophanes, *Acharnians*, 961 (25.33 ff.); A. Mommsen, *Feste*, 384 f. For a Delian festival on the eighth of the month of Artemision, see Nilsson, *Griechische Feste*, 209.

[324] Aeschines, 3, 66 f. (*Against Ctesiphon*). Cf. Deubner, *op. cit.*, 142; Schmidt, *op. cit.* (in n. 284), 103 f.; A. Mommsen, *Feste*, 218, 431 ff.; *idem*, *Chronologie*, 91 f., 92 n. 2; E. J. and L. Edelstein, *Asclepius*, 2 (Baltimore, 1945), 195. Cf. the sanctity of the eighth of the month in Pergamene circles (note inscription in the temple of Asclepius): A. D. Nock, 'Σύνναος θεός,' *Harvard Studies in classical philology*, 41 (1930), 3 f., 22.

[325] See texts collected and analyzed by Ludwig Ziehen, PW, 18.1 (1939), 3.42 ff., 10.32–29.7.

[326] *Ars rhetorica*, 3, 1.

sacrifice to Apollo,[327] sacrifice at Erythrae in an unnamed month to Artemis Apobateria, to Apollo and to Leto,[328] some rites performed by a group of women (or girls) standing about an altar in the light of the full moon,[329] an offering of a special πόπανον (cake) to Cronus on the fifteenth of Elaphebolion,[330] a sacrifice to the sun, the moon, and the earth at the time of a lunar eclipse (i.e., at full moon),[331] the assembly (ἀγυρμός) of the μύσται preceding the Eleusinian mysteries in the month of Boedromion,[332] and perhaps the ceremony of marriage,[333] which was defined by the pseudo-Dionysius of Halicarnassus as the equivalent of a public festival.[334] Of these only a few are of any specifically heortological significance: the sacrifice to Apollo mentioned by Plutarch was purely fortuitous and could hardly have been regarded by anyone as an indication that διχομηνία was sacred to Apollo, the meaning of the passage from Sappho is far from clear, and the date of the ἀγυρμός (which rests upon analysis) is not to be found in the sources. Moreover, the texts concerning the solemnization of marriage on the day of the full moon are not at all decisive, and Proclus in his commentary on the *Works and Days* says marriages were performed in Athens at the time of the conjunction of the sun and moon (i.e., at the time of the new moon) because of the occurrence then of the holy marriage of Helios and Selene.[335]

Nevertheless, in view of the religious importance of the lunar calendar, the choice for purposes of cult of διχομηνία or of any day on which the moon was full, or was thought to be, is not without significance. Hesiod pronounces the fourteenth of the month to be the best of all days [336] — possibly because he regarded it as the day of the full moon. And the days of the waxing moon (especially those of the full moon) were thought by the

[327] Plutarch, *Dion*, 23, 3; see Nilsson, ARW, 14 (1911), 444 n.

[328] See the inscription from Erythrae, ed. U. von Wilamowitz-Moellendorff, 'Nordionische Steine,' *Abhandlungen d. k. Pr. Akad. d. Wiss.* (Berlin, 1909), Philos.-hist. Cl., 2. Abh., 49.16–19; Nilsson, *Entstehung*, 33 n.

[329] Fragment 53 (T. Bergk) = fragment 88, ed. E. Diehl, *Anthologia lyrica Graeca*, 1 (Leipzig, 1925), 366.

[330] IG, 2^2, 1367.23 (see n. 320 *supra*), cited by Deubner, *op. cit.*, 154 n. 4, and by A. Mommsen, *Chronologie*, 100 (as CIG, 1, 482, no. 523.23).

[331] Arrian, *Anabasis*, 3, 7, 6; Roscher, *Über Selene u. Verwandtes*, 112.

[332] Deubner, *op. cit.*, 72; cf. Polyaenus, *Strategmata*, 3, 11, 2.

[333] Pindar, *Isthmian Odes*, 8.44 f.; Euripides, *Iphigenia at Aulis*, 716 f.; *Dio Chrysostom*, *Oratio* 7, 70 (1, 202.29–31).

[334] *Ars rhetorica*, 4, 2, quoted in n. 316 *supra*.

[335] On v. 780 (430.19–22): Ἀθηναῖοι τὰς πρὸς σύνοδον ἡμέρας ἐξελέγοντο πρὸς γάμους, καὶ τὰ θεογάμια ἐτέλουν, τότε φυσικῶς εἶναι πρῶτον οἰόμενοι γάμον τῆς σελήνης οὔσης πρὸς ἥλίου σύνοδον. Roscher, *op. cit.*, 76 ff., 110.

[336] *Works and Days*, 819 f.: περὶ πάντων ἱερὸν ἦμαρ. Nilsson, *Entstehung*, 32, incorrectly states that Hesiod in vv. 774 ff. assigns this position of prominence to the twelfth of the month, although Hesiod says only that the eleventh and twelfth days of the month are ἐσθλαί, and pronounces the twelfth to be much superior to the eleventh.

Greeks, as in primitive society, to be a time of prosperity and increase for all forms of life, as opposed to the days of the waning moon.[337] *A priori*, therefore, it might have been expected that the time of the full moon (defined by Geminus as falling between the thirteenth and the seventeenth of the lunar month)[338] would have been regarded as especially suitable for religious holidays. A certain latitude in the choice of the exact day would, of course, be unavoidable, because of the difficulty of determining the precise astronomical instant of the full moon.

Hence, it is not unreasonable to suppose that days chosen for religious observances of one sort or another that fall between the limits of the full moon (between the thirteenth and the seventeenth) were often designated as such because they were thought to coincide with the day of the full moon. The Athenian religious calendar contained a number of such holidays (Hecatombaeon 16: Synoicia; Metageitnion 14: birthday of King Ariarathes of Cappadocia (*ca.* 163–130 B.C.); Metageitnion 15: birthday of Ariarathes's wife, Nysa; Boedromion 15–17: Eleusinian mysteries; Pyanepsion 13: Calligeneia; Gamelion 12–14: Lenaea; Anthesterion 11–13: Anthesteria; Elaphebolion 9–13: city Dionysia; Munychion 16: Munychia; Skirophorion 14: Dipolieia).[339] Moreover, there were two festivals of Poseidon celebrated at Sinope from the twelfth to the twentieth of the month of Taureon, and from the twelfth to the fourteenth of the month of Poseideon.[340] In addition, in months the names of which have not been preserved, the Milesians sacrificed to Hera Anthea on the thirteenth and to Δὶ Νοσίῳ and to Leucus on the fourteenth. The Erythraeans sacrificed to Anchianax on the fourteenth, and to Athena Polias and ταῖς ὄπισθε θεαῖς on the sixteenth.[341] It is difficult to believe that these holidays owed nothing to the lunar character of the period in which they fall.

[337] Basil, *In Hexaemeron, Homilia* 6, 10, MPG, 29, 144A; J. Lydus, *De mensibus*, 3, 11 (50.14–53.5); Apomasaris, *De lunae effectibus*, CCAG, 8.1 (1929), 178–81. Cf. Kalitsounakis, *loc. cit.* (in n. 186 *supra*), 131–4; Franz Cumont, 'Lydus et Anastase le Sinaïte,' BZ, 30 (1929–30), 33. Hugo Rahner, '"Mysterium lunae." Ein Beitrag zur Kirchentheologie d. Vaterzeit,' *Zt. f. katholische Theologie*, 64 (1940), 64, 70 f., and *passim*; Nilsson, *Primitive time-reckoning*, 342 f., 363; Hutton Webster, *Rest days*, 131 ff., 146 f., 148 ff.; Frazer, *Adonis, Attis, Osiris*, 2, 132–9, 140–50; Roscher, *op. cit.*, 59 f., 61 ff.; *idem*, *Nachträge zu meiner Schrift, Über Selene u. Verwandtes* (Leipzig, 1895), 26 f.; *idem*, ed., *Ausführliches Lexikon d. griechischen u. römischen Mythologie*, 2 (Leipzig, 1890–97), 3152 ff.; 4 (*ibid.*, 1909–15), 645–47.

[338] *Eisagoge*, 9, 14 (128.25–7).

[339] See the Festkalender following p. [268] in Deubner, *op. cit.*; for the individual festivals see Deubner, and A. Mommsen, *Feste*, indices, *s.vv.*

[340] Nilsson, *Griechische Feste*, 79. Cf., for the holidays which fall on the twelfth, *idem*, *Entstehung*, 33 n. 1, and ARW, 14 (1911), 441 f.

[341] Nilsson, *Entstehung*, 33 n. 1; Wilamowitz-Moellendorff, *loc. cit.*, 48.14 f., 49.19–22; *Milet*, ed. Theodor Wiegand, etc., Bd. 1, Hft. III (Berlin, 1914), 163.4 f., 8–10.

4. THE TWENTY-SECOND (*η′ φθίνοντος*)

It is not likely that Pletho would have been influenced by Plutarch's reference in the *De Iside et Osiride* to the birthday of the staff of the sun, observed in Egypt on the eighth day of the waning of the Egyptian month (*η′ φθίνοντος*) of Phaophi.[342] More decisive, possibly, might have been the fact that the twenty-second of the month of Anthesterion (*ὀγδόη φθίνοντος*) was, according to the scholiasts on the *Clouds* of Aristophanes, the day of the *Διάσια*, dedicated to Zeus Meilichios, the most important Athenian festival in honor of Zeus, which was celebrated in Athens on the twenty-second (the twenty-third in a full month) of the month of Anthesterion.[343]

In all probability Pletho was less affected by regard for any of the ceremonies stated to have taken place on the twenty-second of the month than by the structural demands of his calendar. For it is obvious from the structure of his month (from his other holidays and from his dependence upon Aristotle and Theophrastus in computing the days of the month) that he would have been compelled to set aside the twenty-second as an *ἱερομηνία* for the sake of symmetry and balance, especially since all his *ἱερομηνίαι* were vital in the lunar reckoning, and at least four of the five (the first, the eighth, *διχομηνία*, *ἕνη καὶ νέα*) recurred monthly in the ancient religious calendar.

5. SPECIAL HOLIDAYS AT THE END OF THE YEAR

The two special *ἱερομηνίαι* of the last month of Pletho's year, the third and the second, counting regressively, of the last week of the month (*τρίτη, δευτέρα ἀπιόντος μηνὸς τοῦ ἐσχάτου*), corresponding to the 27th and the 28th according to our reckoning, and beginning in the evening of *τετράς* (our 26th), the 'vigil' of *τρίτη*, which he designated as holidays in addition to *ἕνη* and *ἕνη καὶ νέα*,[344] were probably instituted by him to coincide with the festival described by Julian (n. 144 *supra*) as having been celebrated annually at the end of December, or with the so-called *ἀποφράδες*. Apparently any day connected with bad fortune could be described as *ἀποφράς*,[345] but

[342] 52 (372B).

[343] On v. 408 (102.31 ff.); cf. scholium on *Knights*, 445 (50.25). Deubner, *op. cit.*, 155 ff.; A. Mommsen, *Feste*, 421 f. and index *s.v. Diasien*. For this method of computing *η′ φθίνοντος*, see n. 256 *supra*.

[344] Alexandre, 238.21–240.3. In *Aetia Romana*, 34 (272D), Plutarch says Brutus made offerings to the dead in December (which, as we have seen above, corresponds closely to Pletho's last month), and asks: *πότερον, ὥσπερ ἡμέρας ληγούσης καὶ μηνὸς φθίνοντος εἰώθασιν ἐναγίζειν οἱ πολλοί, λόγον ἔχει καὶ τοῦ ἐνιαυτοῦ καταστρέφοντος ἐν τῷ τελευταίῳ μηνὶ τιμᾶν τοὺς τεθνηκότας; ἔστι δὲ τῶν μηνῶν τελευταῖος ὁ Δεκέμβριος.*

[345] Lucian, *Ψευδολογιστὴς ἢ περὶ τῆς ἀποφράδος*, 8 (169), 12 (172); *idem*, *Timon*, 43 (155); Plutarch, *De fraterno amore*, 18 (489C); Suidas, *s.v. ἀποφράδες ἡμέραι* (from Appian); cf. Plato, *Laws*, 7, 800D; J. Lydus, *De mensibus*, 3, 10 (46.19 f., 48.13–15, 49.3 f.).

in late antiquity and in the Middle Ages the term ἀποφράδες seems to have been associated with the εἰκάδες (the twenties of the month) and, more particularly, with the fourth, third, and second days before the end of the month.[346] According to Plutarch, the sixth day before the end of the month (ἕκτη φθίνοντος) of Thargelion, the date of the festival of the Plynteria, was deemed especially unlucky by the Athenians (ἐν ταῖς μάλιστα τῶν ἀποφράδων).[347] The word ἀποφράδες, though often derived from ἀποφράττω ('stop up,' 'obstruct') because of the obscuration of the light of the moon on these days,[348] is commonly defined as ἀπηγορευμέναι ἡμέραι (forbidden days, *dies nefasti*). According to the *Etymologicon magnum*:

> The Athenians called the 'forbidden days' which they deemed worse than the rest ἀποφράδες, and identified them with the fourth, third, and second days before the end of the month, the days appointed for the trial of murder cases. [They were so named] because the light of the moon seems to be cut off on these days.[349]

On the ἀποφράδες, which were considered unsuitable for ordinary pursuits,[350] men refrained from associating with each other, sanctuaries and ordinary courts were closed, oracular responses were unobtainable, and no venture was undertaken for which success was desired.[351]

[346] *Etymologicon magnum* as quoted in n. 349 *infra; Etymologicum Gudianum*, ed. A. de Stefani, 1 (Leipzig, 1909), 178.14 f. Cf. Arrian Nicomedensis, fr. 61, FHG, 3, 598.4 ff. = Eustathius on Dionysius Periegetes, 803, ed. G. Bernhardy, *Geographi Graeci minores*, 1 (Leipzig, 1828), 252.32 ff.; pseudo-Zonaras, *Lexicon*, 1, 240.27–9; Arsenius (1465–1535, Latinizing archbishop of Monembasia in the Peloponnesus), *Violetum*, ed. C. Walz (Stuttgart, 1832), 69.20–22; Pollux, *Onomasticon*, 8, 117; cf. n. 348 *infra*.

[347] Plutarch, *Alcibiades*, 34, 1; Deubner, *op. cit.*, 17 ff.; A. Mommsen, *Feste*, 491 ff.

[348] *Lexicon rhetoricum Cantabrigiense*, 341.5 f.: τὰς δὲ μετὰ τὴν εἰκάδα πάσας ἀποφράδας καλοῦσιν, παρόσον ἀποπέφρακται τὸ σελήνης φῶς ἐν αὐταῖς. Pseudo-Zonaras, *Lexicon*, 1, 240.30–241.1; Arsenius, *Violetum*, 69.23 f.; *Etymologicum Gudianum*, ed. A. de Stefani, 1 (Leipzig, 1909), 178.16. Cf. Pollux, *Onomasticon*, 8, 141.

[349] Ed. Thomas Gaisford, 131.13–19: Ἀποφράδες: ἀποφράδας ἔλεγον οἱ Ἀττικοὶ τὰς ἀπηγορευμένας ἡμέρας, ἃς ὑπελάμβανον χείρους εἶναι τῶν ἄλλων· ἃς δὴ καὶ ἐπεικάδας καλοῦσι φθίνοντος τοῦ μηνός, τετράδα, τρίτην, δευτέραν. ἢ τὰς ἡμέρας ἐν αἷς τὰς φονικὰς δίκας ἐδίκαζον· διὰ τὸ οἷον ἀποφράττεσθαι τὸ τῆς σελήνης φῶς ἐν αὐταῖς. The three days designated were the ones set apart for the trial of murder cases: Pollux, *Onomasticon*, 8, 117. Erwin Rohde, *Psyche* (8th ed., Engl. tr., London, 1925), 196 n. 88, refers to this passage from *Etym. magn.* (plus *Etym. Gud.*, cited in n. 346), and mistakenly takes it to mean that the last three days of the month were consecrated to the spirits of the underworld. Cf. Moeris, *Atticistes*, ed. I. Bekker, *Harpocration et Moeris* (Berlin, 1833), 190.13; Orion Thebanus, *Etymologicon genuinum*, ed. F. G. Sturz (Leipzig, 1820), 25.5 ff.; *Lexicon Vindobonense*, 29.11 f.

[350] Hesychius and Suidas, *s.v.*; Timaeus, *Lexicon vocum Platonicarum*, ed. G. A. Koch (Leipzig, 1828), 41.1–3; scholiast on Plato, *Laws*, 7, 800D (329); *Anecdota Graeca*, ed. Bekker, 1, 5.8 f. (cf. 204.31 f.), 438.31 f.; *Anecdota Graeca*, ed. Bachmann, 1, 136.28 ff.

[351] Lucian, *Pseudologistes*, 12 (172); Plutarch, *Alexander*, 14, 4; *idem*, *De Ei apud Delphos*, 20 (393C); Arsenius, *Violetum*, 69 f. Cf. the scholiast on Lucian, *Timon*, 43, ed. H. Rabe, *Scholia in Lucianum* (Leipzig, 1906), 117.14 ff.

6. Ἕνη AND ἔνη καὶ νέα

In Pletho's chapter on the calendar, both ἔνη and ἔνη καὶ νέα are regular monthly ἱερομηνίαι, but it is only from the *De mensibus* of Theodore of Gaza that we learn that the former had been set aside by Pletho for the worship of the god Pluto, and the latter for self-examination (τῇ ἑαυτῶν ἐπισκέψει).[352] The dedication of ἔνη to Pluto, the chief god of the underworld, and an important divinity in Pletho's pantheon,[352a] can be illustrated by reference to the statement of Plutarch in the *Aetia Romana*, a work with which Pletho seems to have been familiar, that 'most peoples are accustomed to make offerings to the dead at the close of the day and at the end [? on the last day of, or during the last days of] the month' (. . . ἡμέρας ληγούσης καὶ μηνὸς φθίνοντος εἰώθασιν ἐναγίζειν οἱ πολλοί . . .).[353]

Nilsson points out that the custom mentioned by Plutarch was Roman rather than Greek,[354] but Plutarch's authority would have carried weight with Pletho, who may have been influenced also by the texts that connect the thirtieth of the month (τριακάς) with services in honor of the dead or with offerings to Hecate, goddess of the underworld. Two such, concerning Hecate, occur in the *Deipnosophistae* of Athenaeus, and in a scholium on the *Plutus* of Aristophanes.[355] Others are to be found in the paroemiographers, who explained the proverbial expression, τὰς ἐν ᾅδου τριακάδας, as meaning that 'the thirtieth is honored in Hades because of Hecate' (τιμᾶται ἡ τριακὰς ἐν ᾅδου διὰ τὴν Ἑκάτην). This exegesis, which is to be found in the collections of proverbs assembled by Diogenianus (fl. *ca.* 98–117), Gregorius Cyprius (end of the thirteenth century), Michael Apostolius (a disciple and friend of Pletho), and Arsenius (son of the former), is supplemented in two of the manuscripts of Diogenianus by the statement, 'The image of Hecate is set up at cross-roads, and rites in honor of the dead are performed on the thirtieth' (ἀφιδρυμένη Ἑκάτη πρὸς ταῖς τριόδοις ἐστί, καὶ τὰ νεκύσια τῇ τριακάδι ἄγεται).[356]

Nilsson suspects that this interpretation of τριακάς is nothing but a con-

[352] MPG, 19, 1208AB, 1209C.

[352a] Alexandre, 114.9 f., 134, and *passim*.

[353] *Aetia Romana*, 34 (272D), quoted in n. 344 *supra*; cf. *ibid.*, 19 (268B).

[354] *Entstehung*, 38.

[355] *Deipnosophistae*, 7, 325A (meals offered to Hecate ταῖς τριακάσι). Scholiast on Aristophanes, *Plutus*, 594 (357.33 ff.: meals offered [monthly] κατὰ νουμηνίαν as sacrifice to Hecate ἐν ταῖς τριόδοις . . . τῇ Ἑκάτῃ θύουσι τῇ τριακάδι).

[356] *Paroemiographi Graeci*, 1, 312.5 f. (with notes from the manuscripts); 2, 87.4 f. (cf. 140.16–18), 661.3 f.; Arsenius, *Violetum*, 443. For a different exegesis, cf. Suidas, *s.v.* τὰς ἐν ᾅδου τριακάδας, and n. 360 *infra*. Cf. on Apostolius, J. E. Powell, 'Michael Apostolius gegen Theodorus Gaza,' *BZ*, 38 (1938), 71–86.

fusion arising from the memorial services held in honor of friends and relatives 30 days after death. But a later writer, the author of a special monograph on this subject, who, however, makes no use of the paroemiographers, points to the Λέξεις ῥητορικαί, in which Ἑκαταῖα are defined as 'sacrifices to Hecate, which are offerings to the dead' (*τὰ τῇ Ἑκάτῃ θυόμενα, ἅπερ ἐστὶ τῶν νεκρῶν ἐναγίσματα ἡ γὰρ Ἑκάτη ἐπὶ τῇ τιμῇ τῶν νεκρῶν ἦν*), refers to the texts associating Hecate with *νουμηνία* (nn. 295 and 355 *supra*), and concludes that there were offerings to Hecate and the dead that were made on the thirtieth, or last, day of the month, *νουμηνία* and *τριακάς* being all but completely interchangeable (nn. 238, 288 f., 361 *supra*) in the lunar month.[356a] Moreover, a scholiast on Plato's *Laws* and a number of Greek lexicographers record the tradition, not noticed by Nilsson, that during the *ἀποφράδες*, which, as we have seen, were frequently identified with the twenties of the month, libations were poured to the dead.[357] Parallel, though possibly unconnected, with these practices is the notion, prevalent in primitive society, that the moonless days of the month (the *ἀσέληνοι*, defined in the *Geoponica* as extending from the twenty-ninth of the old moon, or lunar month, to the second of the new) are inauspicious.[358]

Theodore of Gaza accuses Pletho of having invented *ἔνη* in order that the *ἱερομηνία* in honor of Pluto might have an impressive designation (*τὸ σεμνὸν ἔχῃ καὶ τραγικόν*).[359] He seems not to have realized that there was ancient warrant for venerating the powers of the underworld during the *ἀποφράδες*, or that some Byzantine writers associated the last day of the month with rites in honor of the dead.[360] If there was some basis for Theodore's assertion that Pletho had dedicated *ἔνη* to Pluto, it is perhaps permissible to conjecture that Pletho consecrated *ἔνη* (which was, as we have seen, an ancient form for the last day of the old moon or month)[361] to

[356a] Emil Freistedt, *Altchristliche Totengedächtnistage u. ihre Beziehung zum Jenseitsglauben u. Totenkultus der Antike* (*Liturgiegeschichtliche Quellen u. Forschungen*, Heft 24 [Münster in Westf., 1928]), 164–7. *Anecdota Graeca*, ed. Bekker, 1, 247.27–29; Rohde, *Psyche*, 167.

[357] Hesychius, *s.v.* (who speaks of a period of seven days devoted to sacrifices to the dead); Timaeus, *Lexicon vocum Platonicarum*, ed. Koch, 41; Suidas, *s.v.* *ἀποφράδες* (1, 328.16 f., 20); *Anecdota Graeca*, ed. Bachmann, 1, 136.28 f.; on Plato, *Laws*, 7, 800D (329); *Anecdota Graeca*, ed. Bekker, 1, 438.31 ff.; Arsenius, *Violetum*, 69.20.

[358] *Geoponica*, 1, 13, 2; 5, 10, 3; Hutton Webster, *Rest Days*, 136–40.

[359] MPG, 19, 1209C; cf. 1208A.

[360] *Ibid.*, 1201B. Note, however, the following (on memorials in honor of the dead 30 days after death [or burial]): *Anecdota Graeca*, ed. Bekker, 1, 268.19–23; Pollux, *Onomasticon*, 1, 66 (1, 21.5 f.); *Etymologicum genuinum*, Harpocration, Photius, and Suidas *s.v.* *τριακάς*: *τοῖς τετελευτηκόσιν ἤγετο ἡ τριακοστὴ ἡμέρα διὰ θανάτου καὶ ἐλέγετο τριακάς*. Cf. *Etymologicon magnum*, 765.31 n.; Rohde, *Psyche*, 196 n. 87.

[361] See nn. 238 *ad fin.* and 240 *supra*. The scholiast on Aristophanes, *Clouds*, 1131 (126.18–

Pluto because he believed that the Athenians used to commemorate their dead either on the τριακάς itself (and it would be perfectly legitimate, in view of the scholia quoted in n. 361, for him to substitute ἔνη for τριακάς, even though in his calendar ἔνη was not actually the last day of the month), or during the final days of the month (ἀποφράδες).

Whether or not Pletho had actually devoted ἔνη to the worship of Pluto, he did regard it as a fast-day, except in hollow months, when the τετρὰς ἀπιόντος (the twenty-sixth day of the month according to our reckoning, the day which was often regarded as the first of the ἀποφράδες), was set apart by him for this purpose. The assignment of ἔνη to fasting may have arisen out of a slightly defective recollection of the statement of Marinus that Proclus invariably fasted on ἔνη καὶ νέα. The example of Proclus may also explain Pletho's prescription that the hymns regularly sung on ἔνη καὶ νέα be sung on the τετρὰς ἀπιόντος, the day of the fast in hollow months.[362] It is conceivable, also, that the fasting on the τετρὰς ἀπιόντος in hollow months represents a reminiscence of the fact that one of the two Christian weekly fasts falls on Wednesday (τετράς or τετάρτη).

In the Athenian calendar, ἔνη καὶ νέα of the month of Pyanepsion was the day of the Χαλκεῖα, a festival in honor of Athene (Pollux and Harpocration say it was dedicated to Hephaestus);[363] and on the last day of Skirophorion the Athenians offered sacrifice to Zeus Soter and Athene Soteira.[364] The Delians sacrificed to Apollo, Artemis, and Leto at the end of the month of Poseideon.[365] Pletho's ἔνη καὶ νέα, on the other hand, which was reserved for self-criticism and analysis,[366] seems to be under the influence of Proclus, who, on the basis of Hesiod, *Works and Days*, 765, recommends, as do

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20) says: μετὰ δὲ δευτέραν [*sc.* from the end of the month] ἀκτέον ἔνην, τουτέστι τὴν τελευταίαν τοῦ μηνὸς ἡμέραν. Cf. *ibid.*, 1179 (127.45 ff.): ὅτι οὐκ ἔστιν ἔνη καὶ νέα μία ἡμέρα, ἀλλὰ δύο, ἔνη μὲν ἡ τριακάς, νέα δὲ ἡ νουμηνία. See also for discussion and other texts Schmidt-Rühl, *Handbuch*, 151 f.; Mommsen, *Chronologie*, 80 f., 113.

[362] Alexandre, 240.6 ff.; Marinus, *Vita Procli*, 19 (33.18 f.). On the τετρὰς ἀπιόντος, the first of the ἀποφράδες, see n. 346 and n. 349 *supra*.

[363] Deubner, *Attische Feste*, 35 f.; A. Mommsen, *Feste*, 46, 342 ff.

[364] Deubner, *op. cit.*, 175; A. Mommsen, *Feste*, 524 ff.

[365] T. Homolle, 'Comptes et inventaires des temples déliens en l'année 279,' BCH, 14 (1890), 495.

[366] Cf. Julian, *Oratio* 6, 200CD, ed. Wright, 2, 54–56; and W. Koch, 'Comment l'Empereur Julien tâcha de fonder une église païenne,' *Revue Belge de philologie et d'histoire*, 7 (1928), 1376 ff. The assignment of this day to self-criticism (τῇ ἑαυτῶν ἐπισκέψει) depends solely on the testimony of Theodore of Gaza (MPG, 19, 1208A), who objects that every day of the month should be devoted to this kind of scrutiny (*ibid.*, 1208BC). This is not to be confused with confession, for a certain kind of which, involving sexual passion, Pletho had made special provision (Alexandre, 128.4 ff.). On ancient precedents for confession, see Raffaele Pettazoni, *La confessione dei peccati*, 3 (Bologna, 1936), 54–220; Franz Steinleitner, *Die Beicht im Zusammenhange mit der sakralen Rechtspflege in d. Antike* (Leipzig, 1913).

Moschopulus and Tzetzes after him, that the thirtieth (*τριακάς*, i.e., the last day of the month) be devoted to leisure, to contemplation of the work of the previous month, and preparation for the month to come.[367] Tzetzes remarks that ants abstain from work on the thirtieth, and that Orpheus looked upon this day as inauspicious for all undertakings except barter (*φαύλην πᾶσιν ἔργοις . . . δοσοληψίαις δὲ μόναις ἐσθλήν*).[368]

Theodore of Gaza complains that Pletho had set aside too many holidays. This criticism is repeated with approval by Alexandre in his edition.[369] It is difficult, however, to see the justice of this objection, since Pletho's system made allowance for a maximum of 76 festivals annually (in a year of thirteen months, if the last month were full; 75 if hollow; 70 in a year of 12 months). This is far from an excessive number, when contrasted with the multiplicity of saints' days and holy festivals in the Christian Church. Following with a few minor changes the precedent of a law of Valentinian II, Theodosius, and Arcadius (August 7, 389, which is preserved in the *Codex Theodosianus*), the *Codex Iustinianus*, the *Basilica*, and the *Tipoukeitos* (written by Patzes at the end of the eleventh century and originally entitled *τί ποῦ κεῖται*) sanctioned the observance of more than 120 annual holidays (52 Sundays, two whole months *ad requiem laboris* in the summer and at harvest time, January 1, the anniversaries of the foundation of Rome and Constantinople, the week before Easter and the week following, Christmas, Epiphany, the *commemoratio apostolicae passionis*, and certain imperial celebrations). The Emperor Leo the Wise (886–912) added several more, and the situation had grown so bad by the middle of the twelfth century that there were only 156 days on which legal business could be transacted in the courts.[370] To prevent the collapse of the administration of justice thus threatened, the Emperor Manuel I Comnenus published a novel in 1166, which limited the number of what we should call legal holidays to 119 (52 Sundays plus 67 week days). On these days, termed *πάντη* or *τελείως ἄπρακτοι*, it was illegal to transact business in the law courts. Twenty-seven additional days were half holidays, on which the courts were to be closed for part of the day

[367] On Hesiod's *Works and Days*, 765 (763) (415.31 ff., 417.1–418.1).

[368] *Ibid.* (418.5–11, 427.1 ff.). Cf. J. Lydus, *De mensibus*, 3, 11 (50.11–16).

[369] MPG, 19, 1208AB; Alexandre, lxxiv.

[370] *Codex Theodosianus*, 2, 8 (*De feriis*), edd. T. Mommsen et P. M. Meyer, 1.2 (Berlin, 1905), 87–90; *Codex Iustinianus*, 3, 12, ed. P. Krueger, *Corpus Iuris Civilis*, 2, 127 f.; *Basilica*, 7, 17, 23, ed. Karl W. E. Heimbach, 1 (Leipzig, 1833), 316; *Novellae Imp. Leonis*, 88 (cf. 54), ed. K. E. Zachariae von Lingenthal, *Ius Graeco-Romanum*, 3 (Leipzig, 1857), 184 (cf. 147 f.). Cf. *Novellae Andronici senioris*, 39, *ibid.*, 672–87; *Tipoukeitos*, 7, 17, edd. C. Ferrini et G. Mercati, *Studi e Testi*, 25, 79–81. Cf. K. E. Zachariae von Lingenthal, *Geschichte des griechisch-römischen Rechts* (3rd ed., Berlin, 1892), 362 f.; Adolf Berger, 'Tipoukeitos,' *Traditio*, 3 (1945), 394–402.

only.[371] Thus, even after this reform, the medieval church had approximately twice as many holidays as Pletho.

XIII. LITURGICAL PRESCRIPTIONS

To round out this summary of the ancient precedents for Pletho's religious calendar, mention should be made of the five daily prayers (which are in prose) and the twenty-eight hymns (which are in dactylic hexameters) that Pletho, guided by the example of pagan Greek literature, in which prayers and hymns abound,[372] composed for the use of the subjects of his ideal state.[373] Despite the somewhat dubious praise of one critic, who declared the hymns worthy of their distinguished author (*dignis illis quidem tanto philosopho*),[374] neither the hymns nor the prayers, both of which are devoted to the celebration of the glory of the ancient gods of Greece, conceived in Neoplatonic terms, have the slightest literary merit. Duller and less inspired productions can scarcely be imagined. But the directions laid down for their use (*Nomoi*, Book 3, chapter 36: *προσρήσεων τε καὶ ὕμνων χρήσεως διάταξις*) are not without interest.

1. PRAYERS AND *προσκύνησις*

Of the five daily prayers (*προσρήσεις*), one (*ἑωθινή*) was designated for the morning – after rising and before breakfast or in any case before beginning the work of the day (*ἀπὸ κοίτης τε καὶ πρὸ ἀρίστου . . . πρὸ τῶν καθηκόντων ἔργων*), three (*αἱ δειλιναὶ προσρήσεις*) for the afternoon – any time before supper (*μετὰ μεσημβρίαν τε ἀεὶ καὶ πρὸ τοῦ δείπνου*), and one (*ἑσπερινή*) for the evening – after supper and before bedtime (*ἀπὸ δείπνου καὶ πρὸ τῆς κοίτης*), except on a fast-day, when it should come after sunset and before supper.[375] Since the three afternoon prayers, which were recited

[371] MPG, 133, 749–61; ed. K. E. Zachariae von Lingenthal, *Ius Graeco-Romanum*, 3, 469–76. For the situation in the Latin West, see Edith C. Rodgers, *Discussion of holidays in the later middle ages* (N. Y., 1940), 9 ff., 80 ff., 92 ff., 107 f.; cf. Vincent J. Kelly, *Forbidden Sunday and feast-day occupations* (Washington, D. C., 1943), 63 ff.

[372] On ancient Greek hymns and prayers, see Wünsch, *s.v.* Hymnos, PW, 9 (1916), 140–83; O. Kern, *s.v.* Mysterien, PW, 16 (1935), 1282 ff.; P. Stengel, *Die griechischen Kultusaltertümer* (ed. Iwan v. Müller, *Handb. d. klass. Altertumsw.*, 5, 3 [Munich, 1920]), 78 ff.; Kurt v. Fritz, 'Greek prayers,' *Review of Religion*, 10 (1945), 1–39; cf. Friedrich Heiler, *Das Gebet* (5th ed., Munich, 1923), *passim*; Henricus Braune, *Περὶ εὐχῆς, veterum de precibus sententiae* (Marpurgi Chattorum, 1935).

[373] Alexandre, 132–202 (prayers, i.e. *προσρήσεις*), 202–228 (hymns); 156, 162–4, 168, 228–40 (directions for the use of the prayers and the hymns).

Three of the lost chapters of the *Nomoi* (3, 37–39 [cf. 40]) had treated of sacrifices to the gods: 37 (*τίσι τῶν θεῶν τίνα θυτέα*), 38 (*ἐπὶ τίσι πράξεσι, τίσι τε θεῶν καὶ ὅπως θυτέα*), 39 (*ὅπως ἔχουσι τῶν θυσιῶν μεταληπτέα*), 40 (*περὶ ἀκριβείας τῶν πρὸς τοὺς θεούς*): Alexandre, 14.

[374] *Ibid.*, lxxvi (Lilius Gyraldus).

[375] *Ibid.*, 228–30.

with the interlude of a hymn between the first and second, and between the second and third (Alexandre, 234), were apparently regarded by Pletho as parts of a single service, we have to do here with a total of only three separate hours of prayer, as is evident from the words of the ἱεροκῆρυξ (n. 388a *infra*). Consequently, there is no possibility of his having been influenced by the five daily prayers of Islam (which have entirely different limits), or by Theophrastus's division of the waking hours of the day into five parts.[376]

Pletho's προσρήσεις reflect the Neoplatonic view of prayer. According to Proclus,[377] citing Porphyry, prayer was an important constituent in the religious systems of the wisest men of all nations, — the Brahmans of India, the Magi of Persia, and the chief theologians of Greece. The Chaldaeans, also, paid heed to such matters (τῆς ἱερᾶς θρησκείας), he says, while Porphyry and Iamblichus looked upon prayer as an aid to men in the quest for union with the gods,[378] a conception that occurs, in very similar form, in both Christianity and Islam. Prayer is not effective, however, Iamblichus adds, if it is not accompanied by proper comprehension of the hierarchical classification (τάξις) of the gods. All these elements are to be found in Pletho, who names the Brahmans, the Magi, Porphyry, and Iamblichus among his sources (pp. 190 f. *supra*), leans heavily upon Proclus and the so-called Chaldaean Oracles (Part II, VI *infra*), touches upon the connection between prayer and union with the gods,[379] and devotes two of his προσρήσεις to an analysis of the gods and the various categories into which they are divided.[380]

More specifically, Pletho's institution of three daily prayers is in accord with what seems to have been a fairly general convention among the pagans of the early centuries of the Christian era. Plutarch says that the Egyptians made offerings to the Sun at sunrise, midday, and sunset; and prayer thrice

[376] Theophrastus, *De signis temporum*, 1, 9; Unger, *Zeitrechnung*, 717, wrongly interprets these five terminal points as dividing the day into three parts. For the Islamic hours of prayer, see Eilhard Wiedemann and Josef Frank, 'Die Gebetszeiten in Islam,' *Sitzungsberichte d. physikalisch-medizinischen Sozietät zu Erlangen*, 58/59 (1926-7), 1-32; Eugen Wittwoch, 'Zur Entstehungsgeschichte des islamischen Gebets u. Kultus,' *Abhandlungen d. k. Pr. Ak. d. Wiss.*, Philos.-hist. Cl. (Berlin, 1913), Nr. 2; Juynboll, Hughes, and Lane cited in n. 423 *infra*.

It should be noted that Täschner nowhere claims that Pletho's liturgy contained Muslim elements.

[377] *In Timaeum*, 1, 208.16 ff. On the Neoplatonic view of prayer, see Henricus Schmidt, *Veteres philosophi quomodo iudicaverint de precibus*, RGVV, 4.1 (Giessen, 1907), 48-54.

[378] *In Timaeum*, 1, 208.7 ff., 210.1 ff., 30 f., 211.1 ff., 18 ff., 28 ff., 212.1 ff., notes and *passim*. See also Sallustius, *Concerning the gods and the universe*, 16, ed. and transl. Arthur D. Nock (Cambridge, Eng., 1926), lxxxiv f., 28-31.

[379] Alexandre, 140.8 ff., 17-26 (cf. *In Timaeum*, 1, 211.18 f.), 152.14 ff., 162.16 ff., 168.3 ff., 182.2, etc. Pletho's appeal to the authority of the Brahmans of India is to be found in his bibliography: *ibid.*, 30.

[380] *Ibid.*, 156-182; *In Timaeum*, 1, 211.8 ff.

a day at the same intervals is mentioned by Lucian and other late pagan writers.[381] But most pertinent for Pletho is the example of Proclus, who worshipped three times a day, prostrating himself before the sun in the morning, around noon, and about the time of sunset (*προσκυνῆσαι ἥλιον ἀνίσχοντα, μεσουρανοῦντα τε καὶ ἐπὶ δύσιν ἰόντα*),[382] and of the Emperor Julian, who declared in a brief manual of instructions for priests that

> . . . we ought to pray often to the gods, both in public and private, if possible thrice a day, but if not so often, certainly at dawn and in the evening . . . For dawn is the beginning of the day, as twilight is of the night, and it is proper to begin both periods with sacrifice to the gods . . .[383]

The hours for the three daily offices are defined so loosely by Pletho and within such broad limits that it is possible, perhaps, to see in them an accommodation to the ancient practice of reckoning the hours of the day from four fixed points,[384] marking off a total of three intervals of time. This factor may have had some influence, but the chief element here seems to have been the pagan precedent. It is unlikely that Pletho was affected to any degree by the three daily prayers of either the early Christians [385] or the Jews,[386] although his prayers may have been intended as a substitute for the seven canonical hours.

[381] Plutarch, *De Iside et Osiride*, 52 (372D); Lucian, *Icaromenippus*, 13 (767). Cf. also the passages from the *Vita Apollonii*, Lucian (concerning the cult of Mithra), and the *Corpus Hermeticum* cited and discussed by F. J. Dölger, *Sol Salutis* (*Liturgiegeschichtliche Quellen u. Forschungen*, Heft 16/17 [2d ed., Münster in Westf., 1925]), 23 f., 28, 30 n. 1 (Christian anathema against Manichaean practices of this sort), 33 f., and *passim*. Cf. A. D. Nock, 'Σύνναος θεός,' *loc. cit.* (n. 324 *supra*), 8.

[382] Marinus, *Vita Procli*, 22 (40.31–33). Cf. Hesiod, *Works and Days*, 338 f.; Plato, *Laws*, 10, 887C; *Symposium*, 220D; Horst, *op. cit.* (n. 400a *infra*), 24, 75, and *passim*.

Porphyry in his annotation on *Iliad*, 10.252 f., observes that Homer had divided the night and the day into three parts (*ὅτι δὲ καὶ τὴν ἡμέραν καὶ τὴν νύκτα εἰς τρία διαιρεῖ δῆλον*), and cites *Iliad*, 21.111 (*ἔσσεται ἢ ἠὼς ἢ δείλη ἢ μέσον ἦμαρ*): *Porphyrii quaestionum homericarum ad Iliadem pertinentium reliquias*, ed. H. Schrader (Leipzig, 1880), 151.23–5, and n.

[383] *Fragmentum epistolae*, 302AB, ed. Wright, 2, 328; the translation is based upon that of Mrs. Wright. For a discussion of ancient hours of prayer, see Hermann Usener, *Götternamen* (Bonn, 1929), 185 ff.; F. J. Dölger, *loc. cit.* (n. 381 *supra*). Sozomen, *Historia ecclesiastica*, 5, 16, 2, MPG, 67, 1261A = ed. R. Hussey, 2 (Oxford, 1860), 489.9 f., remarks that Julian had offered prayer at fixed times (*ὡρῶν τε ῥητῶν καὶ ἡμερῶν τεταγμέναις εὐχαῖς*); cf. W. Koch, *loc. cit.* (n. 366 *supra*), 529, 1373 ff.

[384] Kubitschek, *Grundriss*, 187 f., with citations of ancient texts; Bilfinger, *Die antiken Stundenangaben*, 46–73; cf. *idem*, *Die mittelalterlichen Horen* (Stuttgart, 1892), 1 f.

[385] *Acta Thaddaei*, ed. R. A. Lipsius, *Acta Apostolorum apocrypha*, 1 (Leipzig, 1891), 278.10 n.: *αὐτῷ μόνῳ ἀτενίζοντες εἰς τὸν οὐρανὸν προσπίπτετε ἑσπέρας καὶ πρωΐ καὶ μεσημβρίας*. Cf. *Didache*, 8, 3, and texts given by Adolf Harnack, *Die Lehre d. zwölf Apostel* (Leipzig, 1884), 27 f.; Theodor Schermann, *Die allgemeine Kirchenordnung, frühchristliche Liturgien u. kirchliche Überlieferung*, 2 (*Studien zur Geschichte u. Kultur des Altertums*, Dritter Ergänzungsband, Zweiter Teil [Paderborn, 1915]), 477 ff.; O. Holtzmann, 'Die täglichen Gebetsstunden in Judentum u. Urchristentum,' *Zt. für die Neutestamentliche Wissenschaft*, 12 (1911), 90–107.

After stating the proper time for the recitation of the prayers, Pletho gives instructions for their use. They were to be recited in temples, he says, or in any place free from the contamination of human bones and excrement and receptacles therefor (*τόπος δέ, τά τε ἱερά, καὶ πᾶς ὁ κόπρου τε ἀνθρωπίνης καὶ νεκρῶν ἀνθρωπείων δὴ καὶ τούτων καθαρεύων θηκῶν*).[387] The ritual itself was to be conducted under the supervision of an *ἱεροκῆρυξ*, or by a priest, or by someone chosen by a priest or by the most respected layman present, who was to open the service with a call to prayer.[388]

This summons [Pletho says] was to be couched in the following form: 'Worshippers of the gods, give ear. This is the hour for the morning (or the afternoon, or the evening) prayer to the gods. Let us invoke all the gods and Zeus, who reigns over them, with all our mind, and all our reason, and all our soul.' After this proclamation has been made (once on ordinary days, twice on holidays, and thrice on the days of the new moon), the assemblage, to begin the service, must face upward, kneel on both knees, raise the hands with palms up, and cry, 'O gods, be propitious.' While repeating this prayer, the people are, first of all, to worship the gods of Olympus by touching the ground with the right hand and simultaneously lifting one knee. Then, after pronouncing this invocation once and kneeling [in this way] once, they are to worship the rest of the gods with the left hand and with the same words. Next, all must call upon Zeus, the King, saying, 'O Zeus, the King, be propitious,' and falling upon both knees and both hands, with the head touching the ground. In this case, both the invocation and the adoration are to be repeated three times, the whole counting as a single adoration. This rite is to be repeated in the same way once every day for each prayer, and three times on holidays. The people are to perform their obeisances under the leadership of a priest or one of the most venerable of those present, using the Hypophrygian mode for the invocation to the gods worshipped with the right hand, the Phrygian for the invocation to the gods worshipped with the left hand, and the Hypodorian for the invocation to Zeus.[388a]

Then the *ἱεροκῆρυξ* announces the *πρόσρησις*, and, while the company rests

[386] George F. Moore, *Judaism*, 2 (Cambridge, Mass., 1927), 219 f. Daniel prayed three times a day (Dan. 6:10), and David prayed in the evening, in the morning, and in the middle of the day (Ps. 55:18). The Rabbinic tradition knew of morning, afternoon, and evening prayers.

[387] Alexandre, 230.3–5.

[388] *Ibid.*, 230.6 ff.; cf. Symeon of Thessalonica, MPG, 155, 557B.

[388a] Alexandre, 230.11 ff.: *τὸ δὲ κήρυγμα ἐκεῖνο εἶναι, Ἀκούετε, οἱ θεοσεβεῖς· ὥρα ἑωθινῆς ἢ δειλινῆς ἢ ἑσπερινῆς θεοῖς προσρήσεως· ὅλῃ διανοίᾳ, ὅλῃ γνώμῃ, ὅλῃ ψυχῇ, θεούς τε πάντας καὶ ἐπ' αὐτοῖς Δία τὸν βασιλέα προσείπωμεν. οὗ ἐν μὲν ἡμερῶν ταῖς βεβήλοις ἅπαξ, δὶς δὲ ταῖς ἱερομηνίαις, ταῖς δέ γε νουμηνίαις καὶ τρὶς κεκηρυγμένου, πρῶτα μέν ἄνω τε ἅπαντας βλέψαντας, καὶ ἐς γόνατε ἄμφω κεκλιμένους, τώ τε χεῖρε ἠρκότας ὑπτίω, ἐπᾴδειν, Ἵλεῳ εἴητ', ὦ θεοί. σὺν ᾧ προσφθέγματι, θεοὺς πρότερον τοὺς Ὀλυμπίους προσκυνεῖν τῇ μὲν δεξιᾷ τοῖν χειροῖν τοῦ ἐδάφους ἁπτομένους, τοῖν δὲ γονάτοιν θάτερον ἐν τῷ τῇ χειρὶ τοῦ ἐδάφους ἅπτεσθαι ὑπαίροντας. ἐσάπαξ δὲ τό τε πρόσφθεγμα τοῦτο ἐπάσαντας, καὶ ἐσάπαξ προσκυνήσαντας, ἐπ' ἀριστερᾷ αὖ θεοὺς τοὺς λοιποὺς προσκυνεῖν, ὡσαύτως τε καὶ ταὐτὸ ἐπᾴδοντας. εἶτ' αὖ Διὶ τῷ βασιλεῖ ἐπᾴδειν μέν, Ζεῦ βασιλεῦ, ἵλαθι· προσκυνεῖν δὲ ἀμφοῖν μὲν τοῖν γονάτοιν, ἀμφοῖν δὲ καὶ τοῖν χειροῖν, καὶ ἐπὶ τούτοις τῇ κεφαλῇ τοῦ ἐδάφους ἁπτομένῃ. τρὶς δὲ τό τε πρόσφθεγμα τοῦτο ἐπᾴδειν καὶ τρὶς προσκυνεῖν, καὶ μίαν σύμπασαν ταύτην προσκύνησιν λογίζεσθαι*, etc.

on both knees, someone specially selected for this purpose recites the prayer of the hour.[389]

The provision concerning the purity of the place of worship echoes ancient Greek sentiment on such matters,[390] not without a sidelong glance of disapproval at the Christian practice of depositing sarcophagi and the remains [390a] of saints and martyrs in churches and sanctuaries. Ignoring, this time, the example of Plato, who had forbidden (*Laws*, 10, 909D ff.) the performance of cultus, whether of prayer or of sacrifice, except in formally sanctified temples and shrines, Pletho adopted a more liberal policy, which coincided well enough, also, with the popular usage of the pagan Greeks [391] and of the Christian Church. In this regard we may compare the dictum of his friend and disciple, Mark, Metropolitan of Ephesus, in his Ἐξήγησις τῆς ἐκκλησιαστικῆς ἀκολουθίας (*Expositio officii ecclesiastici*), a treatise on the Christian liturgy with special reference to the seven canonical hours, that 'Every place is suitable for prayer, but it would probably be better to pray in some part of the house that is set aside from the rest, and specially holy and revered . . . and better still in holy precincts and churches' (πᾶς μὲν οὖν τόπος εἰς προσευχὴν ἐπιτήδειος, βέλτιον δ' ἴσως ἐν ἀποτεταγμένῳ μέρει τοῦ οἴκου, τῷ σεμνοτέρῳ τε καὶ τιμιωτέρῳ τὰς προσευχὰς ποιεῖσθαι . . . καὶ ἔτι βέλτιον ἐν ἱεροῖς τεμένεσι καὶ ναοῖς . . .).[392]

[389] *Ibid.*, 232.9 ff.

[390] Theodor Wächter, *Reinheitsvorschriften im griechischen Kult*, RGVV, 9.1 (Giessen, 1910), 58 f., 134 f. On the compatibility of the cult of relics in sacred precincts with pagan Greek conceptions of ritual purity see F. Pfister, *Der Reliquienkult im Altertum*, RGVV, 5.2 (Giessen, 1912), 456–59; cf. 429 f., 5.1 (*ibid.*, 1909), 321 ff., and *passim*. Cf. M. P. Nilsson, *Geschichte d. griechischen Religion* (see n. 292 *supra*), 81 f.; E. J. Jonkers, 'Einige Bemerkungen über Kirche u. heidnische Reinheitsvorschriften in den ersten sechs nachchristlichen Jahrhunderten,' *Mnemosyne*, 3a Series, 11 (Leiden, 1942–43), 156–60.

[390a] On Islamic prayers at tombs, etc., see F. W. Hasluck, *Christianity and Islam under the Sultans*, 1 (Oxford, 1929), 8 f., 250 ff., 256–8. Although the Ḥadīth (Muslin tradition) was hostile to the performance of ṣalāt in tombs and forbade the building of mosques over tombs, there was a large number of tomb mosques during the medieval period that housed the relics of Muslim saints: J. Pedersen, *s.v.* Masdjid (mosque), *Encyclopaedia of Islam*, 3 (Leiden-London, 1936), 322–27.

On the close association of the relics of saints with Christian Churches, see in addition to P. de Puniet, *s.v.* Dédicace des églises, DACL, 4.1 (Paris, 1920), 374–405: P. Batiffol, 'De la dédicace des églises, dédicace païenne et d. chrétienne,' *Revue des sciences philosophiques et théologiques*, 28 (1939), 58–70; R. W. Muncey, *A history of the consecration of churches and churchyards* (Cambridge, Eng., 1930); K. M. Rhalles, 'περὶ τῶν ἐγκαινίων τῶν ναῶν κατὰ τὸ δίκαιον τῆς ὀρθοδόξου ἀνατολικῆς ἐκκλησίας,' Ἐθνικὸν καὶ Καποδιστριακὸν Πανεπιστήμιον, Ἐπιστημονικὴ Ἐπετηρίς, 9 (1913), 99–130; Jules Baudot, *La dédicace des églises* (Paris, 1909); Stephan Beissel, 'Umwandling heidnischer Kultusstätten in christliche,' *Stimmen aus Maria-Laach*, 69 (1905), 23–38, 134–43.

[391] Stengel, *op. cit.* (in n. 372 *supra*), 12, 14; cf. A. W. Mair, *s.v.* Prayer (Greek), ERE, 10, 185 f.

[392] MPG, 160, 1165B; cf. Symeon of Thessalonica, MPG, 155, 655AB; Theodore Balsamon (fl. 1193), MPG, 138, 1289BC. Cf. the very similar language of Origen, *De oratione*, 31,

Clear traces of Christian influence are discernible in the actual ritual itself. Pletho's words, ὅλῃ διανοίᾳ, ὅλῃ γνώμῃ, ὅλῃ ψυχῇ, θεούς τε πάντας . . . προσείπωμεν, come from the Septuagint version of the Shema (Deuteronomy 6:5) as cited in the Synoptic Gospels and taken over into the *Liturgy of St. Chrysostom.* In Mark 12:30 (cf. Matthew 22:37, Luke 10:27) we find: ἀγαπήσεις κύριον τὸν θεόν σου ἐν ὅλῃ τῇ καρδίᾳ σου, καὶ ἐν ὅλῃ τῇ ψυχῇ σου, καὶ ἐν ὅλῃ τῇ διανοίᾳ σου, the substitution in Pletho's version of γνώμη for καρδία being in all probability subconscious rather than deliberate. In the *Liturgy of St. Chrysostom,* the deacon, standing in his regular place, begins thus: 'With all our soul and all our mind, let us all say, "O Lord, have mercy"' (εἴπωμεν πάντες ἐξ ὅλης τῆς ψυχῆς, καὶ ἐξ ὅλης τῆς διανοίας εἴπωμεν: κύριε ἐλέησον);[393] and religious services in the Byzantine army often began with the same formula.[394]

The invocation, ἵλεῳ εἴητ' ὦ θεοί (O gods, be propitious), though ostensibly a neopagan attempt to paraphrase κύριε ἐλέησον, based, perhaps, on ancient usage (according to Plato,[394a] in *Laws,* 10, 910B, the purpose of prayer and sacrifice is τοὺς θεοὺς ἵλεως . . . ποιεῖν), actually reflects a sentence from the Gospel of Luke (18:13), ὁ θεός, ἱλάσθητί μοι τῷ ἁμαρτωλῷ, that occurs frequently in the liturgies. In the *Liturgy of St. Chrysostom,* these words from Luke are repeated by both the deacon and the priest in a low voice at the Vesting as they perform three obeisances (προσκυνήματα), again in the Prothesis after three more obeisances (this time with the addition of καὶ ἐλέησόν με), once more by the deacon alone (to himself) in the Prothesis during the Great Entrance, then thrice in a low voice by priest and deacon during an obeisance (προσκυνεῖ), and also, with only a slight change (κύριε, ἱλάσθητι ταῖς ἁμαρτίαις ἡμῶν: [Ps. 78:9]), by the deacon alone near the beginning of the service for the Preparation of the Ministers. They are to be found also at the beginning of the *Liturgy of the Presanctified,*[395] and

MPG, 11, 552C–553A ff.: καὶ περὶ τόπου δέ, ἰστέον, ὅτι πᾶς τόπος ἐπιτήδειος εἰς τὸ εὔξασθαι . . . γίνεται, κτλ.

[393] Ed. F. E. Brightman, *Liturgies eastern and western,* 1 (Oxford, 1896), 373.3 ff.

[394] J. R. Vieillefond, 'Les pratiques religeuses dans l'armée byzantine d'après les traités militaires,' *Revue des études anciennes,* 37 (1935), 325 n. 3.

[394a] Gerhard Kittel, *Theologisches Wörterbuch zum Neuen Testament,* 3 (Stuttgart, 1938), 300, *s.v.* ἵλεως. In addition to the passages which are referred to by Kittel, note the use of ἵλεως in liturgical texts: (1) in the *Menaion* for October 1, ed. Michael Saliberos (Athens, 1904), 3 b: ἵλεων . . . ἔργασαι . . . τὸν Λυτρωτὴν τοῖς σὲ ἀνυμνοῦσιν, Ἀνανία Ἀπόστολε, (2) in a prayer attributed to Eustratius, read on Saturdays in private devotions: ἵλεως γενοῦ μοι, Δέσποτα, to be found in the Συνέκδημος ὀρθοδόξου Χριστιανοῦ ἤτοι Μεγάλη Ἱερὰ Σύνοψις (N. Y., n.d.), 16, (3) in the Εὐχολόγιον Σαραπίωνος, 23, 1, ed. F. X. Funk, *Didascalia et Constitutiones Apostolorum,* 2 (Paderborn, 1905), 184.22 f.: Φιλάνθρωπε εὐεργέτα "σωτὴρ πάντων" . . . ἵλεως γενοῦ τῷ δούλῳ σου τῷδε, *et saepe.*

[395] Brightman, *op. cit.,* 354.40 f., 356.15–17, 378.26, 393.6 f., 353.20; 345.2–5; cf. Theodore the Studite's Commentary on the *Liturgy of the Presanctified,* MPG, 99, 1688B.

were recited every day with three prostrations at the *μεσονύκτιον* (the midnight service): *καὶ πρῶτα μὲν ὑποπίπτοντες ἐπὶ τρεῖς προσκυνοῦμεν, ὑποφθεγγόμενοι τὰς τελωνικὰς ἐκείνας φωνάς· ὁ θεός, ἱλάσθητί μοι τῷ ἁμαρτωλῷ.*[396]

The language of Pletho's invocations is thus indisputably Christian, despite the pagan connotations with which they are invested. In like manner, his *ἱεροκῆρυξ* retains some of the attributes of his pagan counterpart,[397] who called the people to assemble and himself recited the prayers. But the texts from the *Liturgy of St. Chrysostom* show that the *ἱεροκῆρυξ* in the *Nomoi*, notwithstanding his pagan name, was in actual fact playing the role of the deacon, one of whose functions it was to announce the prayers.[398] The use of the word *πρόσχωμεν*,[398a] common in the Byzantine liturgies in the parts assigned to the deacon, may be another unconscious reminiscence of Christian liturgical worship.[399]

For the gestures prescribed by Pletho there is no precise parallel that fits the ceremony in its entirety. But each separate posture has pagan and Christian prototypes; and the ritual as a whole represents a combination of a number of different elements, eclectically chosen and combined. Pletho's attitudes of prayer – looking upward, kneeling on one knee or on both, lifting the hands with palms up, the triple *προσκύνησις*,[400] and the prostration in

[396] Mark of Ephesus, *op. cit.*, MPG, 160, 1168BC.

[397] Kittel, *op. cit.*, 3, 682 ff., 690, *s.v.* *κῆρυξ* (*ἱεροκῆρυξ*); J. Oehler, *s.v.* Keryx, PW, 11 (Stuttgart, 1922), 350.24–357.54.

[398] Brightman, *op. cit.*, 360.3 f., 11 f., 16 f., 28 f., 362.30, 368.2 f., 374.10 f., 376.13–15, etc.; Constantine Porphyrogennetus, *De ceremoniis*, 1 (Bonn, 1829), 224.6, 19 f.; Nicholas Cabasilas (fl. 1350), *Liturgiae expositio*, MPG, 150, 401B, 417A; Symeon of Thessalonica, MPG, 155, 376AD, 393AB, 617C, etc. Andrew Presbyterus, who is commemorated by the Greek church on September 20, is described as *ἱεροκῆρυξ τῆς ἐκκλησίας*: *Menaion*, ed. cit., 183 *ad fin.* Cf. n. 399 *infra*.

[398a] Alexandre, 232.9 ff.: *μετὰ δέ, τοῦ γε ἱεροκήρυκος αὖ κεκηρυχότος, τῇ ἑωθινῇ ἐς θεούς, ⟨ἢ δειλινῇ πρώτῃ⟩, ἢ δευτέρᾳ, ἢ τρίτῃ τῇ ἐς τὸν βασιλέα Δία, ἢ τῇ ἑσπερινῇ ἐς θεοὺς προσρήσει, πρόσχωμεν . . . ἐς γόνατε ἄμφω κεκλιμένοι, οὕτω τόν γ' ὑπὸ τῶν παρόντων τοῦ σεμνοτάτου ἐπιτεταγμένον, τὴν τῇ ὥρᾳ καθήκουσαν ὑπὲρ ἁπάντων τῶν παρόντων πρόσρησιν διεξιέναι . . . Τοῖς ὕμνοις τοῖς ⟨ἐς⟩ θεοὺς πρόσχωμεν.*

[399] Brightman, *op. cit.*, 82.2 f., 101.19, 370.35–7, 371.7 f., 383.27 f., 393.8–11, 423.21 f., 426.17 f., 447.8 f., 456.18 f.; ps.-Germanus, *Rerum ecclesiasticarum contemplatio*, MPG, 98, 412A; Symeon of Thessalonica, MPG, 155, 376D, 445BC, *et saepissime*; *Didascalia et Constitutiones Apostolorum*, ed. Funk, 1 (Paderborn, 1905), 494.3; R. H. Connolly and H. W. Codrington, transl., *Two commentaries on the Jacobite liturgy by George, Bishop of the Arab tribes and Moses Bār Kēphā* (London, 1913), 104.17, cf. 16.24 ff., 29.18–23, 38.18 ff., 42.20 ff., 85.31 ff., and *passim*.

Less often the priest says *πρόσχωμεν*: Brightman, *op. cit.*, 372.33 f.; Nicholas Cabasilas, *loc. cit.* (n. 398), 413B.

[400] A triple *προσκύνησις*, in connection with a libation to *Ἀγαθὸς Δαίμων*, is mentioned by Theophrastus, *περὶ μέθης*, *apud* Athenaeus, *Deipnosophistae*, 15, 693D: *καὶ τρίτον προσκυνήσαντες λαμβάνουσιν* [*sc.* *τὸν οἶνον*] *ἀπὸ τῆς τραπέζης, ὥσπερ ἱκετείαν τινὰ ποιούμενοι τοῦ θεοῦ . . .* Hermann Usener cites no pagan precedents in his monograph, 'Dreiheit,' *Rheinisches Museum*,

general – are well-known from pagan Greek literature and from monuments of ancient art.[400a] In paying homage first to the gods of Olympus by a reverence with the right hand, secondly to the other gods by a reverence with the left hand, and thirdly to Zeus, Pletho seems to have had in mind the scheme proposed by Plato in the *Laws*, as interpreted by Plutarch in the *De Iside et Osiride*, according to which the Olympian gods are worshipped first and are associated with the right hand and with odd numbers, while the other gods (chthonic divinities, demons, etc.) are worshipped after the Olympian gods and are associated with the left hand and even numbers. He was probably influenced also by the ancient Greek series of three libations, the first of which was offered to the gods of Olympus and to Zeus, the second to heroes and demons, and the third to Zeus Soter.[401] The touching of the ground with the hands is apparently connected with the practice of touching or striking the ground in appealing to the gods of the underworld.[401a]

N. F. 58 (1903), 1–47, 161–208, 321–62. On pagan repetition of liturgical formulae three times see Dölger, *op. cit.* (n. 381 *supra*), 93 ff.; Christian examples abound in all the liturgies, liturgical commentaries, and in the *De ceremoniis*.

[400a] The texts, with full bibliographies and references to objects of art have been collected by Johannes Horst, *Proskynein* (*Neutestamentliche Forschungen, Dritte Reihe*, 2. Heft [Gütersloh, 1932]), 44–51, 67–70, and *passim*; Hendrik Bolkestein, *Theophrastos' Charakter der Deisidaimonia*, RGVV, 21.2 (Giessen, 1929), 21–39; Dölger, *op. cit.* (n. 381 *supra*), index *s.v. Gebetszeremonien*; Otto Weinreich, 'Hymnologica (Knien beim Hymnos auf Dionysus),' ARW, 17 (1914), 527 ff.; A. W. Mair, *s.v.* Prayer (Greek), ERE, 10, 183 ff.; Carl Sittl, *Die Gebärden d. Griechen u. Römer* (Leipzig, 1890), 147–73, 174–99; Ernestus Voulliéme, *Quomodo veteres adoraverint* (Halis Saxonum, 1867), *passim*. Cf. Heiler, *op. cit.* (n. 372 *supra*), 98–109, 511–13; Franz Cumont, 'L'Adoration des Mages et l'art triomphal de Rome,' *Atti della Pontificia Accademia Romana di Archeologia, Memorie*, S. 3, vol. 3 (1932–3), 90 and *passim*; Hans Haas, *Bilderatlas zur Religionsgeschichte*, 9.–11. Lfg. (Leipzig-Erlangen, 1926), 54, 166, cf. 172; *ibid.*, 13.–14. Lfg. (Leipzig, 1928), 145, 165, 186, cf. 59. Colette Marique, *Gestes et attitudes de la prière dans la religion grecque de l'époque homérique à la fin de l'époque classique* (Thèse: Université de Liége), I know only from *Revue Belge de philologie et d'histoire*, 19 (1940), 276.

On the προσκύνησις in ruler-cult see Johannes A. Straub, *Vom Herrscherideal in d. Spätantike* (*Forschungen zur Kirchen- u. Geistesgeschichte*, 18 [Stuttgart, 1939]), 81, 235, and *passim*; M. P. Charlesworth, 'Some observations on ruler-cult, especially in Rome,' HTR, 28 (1935), 16 ff., 42 ff. Neither G. Méautis, 'Recherches sur l'époque d'Alexandre,' *Revue des études anciennes*, 44 (1942), 305–8; nor J. A. Scott, 'The gesture of proskynesis,' *Classical Journal*, 17 (1921–22), 403 f., makes any original contribution. Useful for the early period is W. T. Avery, 'The *adoratio purpurae* and the importance of the imperial purple in the fourth century of the Christian era,' *Memoirs of the American Academy in Rome*, 17 (1940), 66–80.

[401] Plato, *Laws*, 4, 717AB: πρῶτον μέν, φαμέν, τιμὰς τὰς μετ' Ὀλυμπίους τε καὶ τοὺς τὴν πόλιν ἔχοντας θεοὺς τοῖς χθονίοις ἄν τις θεοῖς ἄρτια καὶ δεύτερα καὶ ἀριστερὰ νέμων ὀρθότατα τοῦ τῆς εὐσεβείας σκοποῦ τυγχάνοι, τὰ δὲ τούτων ἄνωθεν [τὰ περιττὰ] καὶ ἀντίφωνα, τοῖς ἔμπροσθεν ῥηθεῖσιν νυνδή. Plutarch, *De Iside et Osiride*, 26 (361A): ὅθεν ὁ μὲν Πλάτων Ὀλυμπίοις θεοῖς τὰ δεξιὰ καὶ περιττὰ τὰ δ' ἀντίφωνα τούτων δαίμοσιν ἀποδίδωσιν. See Delight Tolles, *The banquet-libations of the Greeks* (Ann Arbor, 1943), 54–68, and *passim*.

[401a] J. A. MacCulloch, *s.v.* Hand, ERE, 6, 497; Heiler, *op. cit.* (n. 372 *supra*), 103, 512, n. 48–51; and literature cited in n. 400a *supra*. See the texts and monuments discussed by

Though there is no doubt that the προσκύνησις was adopted by Pletho because of its pagan associations, it is no less evident that the form that it takes in the *Nomoi*, – the alternation of postures and the triple prostration, – was determined by his personal acquaintance with the elaborately formalized rites of the imperial and ecclesiastical liturgies. Prostration and kneeling were used by the Byzantine Greeks to express homage, veneration, prayer, supplication, entreaty, penitence, and submission. According to Mark of Ephesus (n. 396 *supra*), a triple προσκύνησις with an invocation was customary at the beginning and end of every prayer (πάσης οὖν προσευχῆς ἀρχόμενοί τε καὶ λήγοντες οὕτω ποιοῦμεν). This ritual was not, of course, intended for the ordinary public liturgy, but we know from many sources (see n. 406 *infra*) that the triple προσκύνησις was one of the most striking features of the liturgy of the church and of the imperial court. Mark himself distinguishes between προσκυνεῖν (prostration) and γονυκλιτεῖν (kneeling),[402] and in the passage quoted (p. 258 *supra*: 'First, falling to [our knees], we bow [our heads to the ground] in reverence three times, repeating [each time, *ut vid.*] the entreaty of the publican, "O Lord, be thou merciful to me, a sinner."') describes a rite that seems identical with Pletho's ceremony in honor of Zeus. Of interest also is the *Typikon* of the Constantinopolitan Convent of the Virgin Mary, τῆς Κεχαριτωμένης, founded by the Empress Irene, wife of Alexius I Comnenus, in 1118, which requires the nuns to recite these words of the publican three times from a standing position, and then to kneel down and prostrate themselves thrice (κλίνασαν τὰ γόνατα καὶ τὴν κεφαλὴν ἕως γῆς), accompanying each prostration with the prayer, 'I have sinned against thee, O Lord; forgive me.' To avoid confusion, it is provided that this ceremony be performed by the nuns in unison, kneeling, prostrating themselves, and rising again under the direction of a leader posted in front of the altar.[402a]

In the present state of our knowledge of the medieval προσκύνησις, it is often difficult, as in some of the texts here adduced, to determine the exact equivalent for such words as προσκυνεῖν, προσπίπτειν, ὑποπίπτειν, and the like, the first of which can mean 'bow' as well as 'make a prostration,' while compounds of πίπτειν can be understood of kneeling without prostration, unless they are accompanied by some form of προσκυνῶ. In the modern liturgy, the clergy and people often get down on their knees to perform a

Ch. Picard, 'Le geste de la prière funéraire en Grèce et en Étrurie,' *Revue de l'histoire des religions*, 114 (1936), 142–57.

[402] MPG, 160, 1168BC, 1165C.

[402a] MPG, 127, 1049C ff. Cf. *ibid.*, 1028A, 1036A; de Meester, *De mon. statu* (n. 403 *infra*), 105, dates it 1118.

prostration, chiefly as a sign of penance, and in the *Liturgy of the Presanctified*, during which there is a great deal of kneeling and prostration, notably at the solemn moment of the Great Entrance, when, as the clergy bring the Holy Sacrament from the sanctuary into the nave, the people fall prostrate in silent adoration. Clues to the medieval practice are not lacking. Prostration in penance is often called for in Byzantine texts and must have occurred also during the medieval *Liturgy of the Presanctified*. We know that the Ἀκολουθία τῆς γονυκλισίας, a special second vesper service consisting of a number of lengthy prayers recited aloud by the priest in the early afternoon of the day of Pentecost, was accompanied by prostration of both people and clergy,[403] and from texts like the *Tractatus de scientia ecclesiastica*, a commentary in Arabic on the Egyptian Rite by Abu Saba (? fourteenth century), we learn that the προσκύνησις of the people at the Elevation of the Host took

[403] On προσκύνησις in penance, see the texts collected by Herbert Thurston, 'Genuflexions and Aves,' *Month*, 127 (1916, pt. 1), 441–52, 546–59; cf. *idem*, '"Afflictions,"' *ibid.*, 129 (1917, pt. 1), 435–45, all three of which appeared also in French transl. by A. Boudinhon, *Revue du clergé français*, 90 (1917), 402–15, 481–98; 92 (1917), 419–31. On Byzantine penitential discipline see the prescriptions of Joannes Jejunator (fl. *ca.* 1100), *Poenitentiale*, MPG, 88, 1889D (kneeling), 1893A (πεσεῖν, ἀνιστᾷν), 1904C (προσκυνήσεις χωρὶς μετανοιῶν), 1916D (full prs., etc.); *idem*, *Sermo de poenitentia*, *ibid.*, 1921C (full pr.), *excerpta*, *ibid.*, 1932D, 1933ABC (full prs.). Note Placide de Meester, transl., 'Règlement des bienheureux et saints pères Sabas-le-Grand et Théodose-le-Cénobiarque pour la vie des moines cénobites et kelliotes,' *Bulletin des oblates séculières de Ste. Françoise Romaine et de l'Union Spirituelle des veuves de France* (Lille, 1937), 25; and *idem*, *De monachico statu iuxta disciplinam Byzantinam* (*Sacra Congregazione per la Chiesa Orientale, Codificazione canonica orientale, Fonti*, Serie II, Fasc. 10 [Rome, 1942]), 7.2 (pp. 4, 77), 61.3 (p. 289), 61.11 (p. 290), 74.6 (p. 302). In these passages μετάνοια usually means 'prostration,' as it does in modern Greek. Properly speaking, however, there is a distinction (see any edition of the Ὡρολόγιον) between μετάνοια μεγάλη (full prostration) and μ. μικρά (or μ. alone, which is merely a bow without kneeling). Cf. Theodore of Andida, *Commentatio liturgica*, 14, MPG, 140, 437B: προσκυνήσωμεν . . . προσπίπτοντες ὑπὲρ ὧν ἡμάρτομεν. Kneeling alone (or ὑποπίπτειν undefined), is prescribed for penitents and certain catechumens in: Origen, *De oratione*, 31, MPG, 11, 552A–D; ps.-Athanasius, *De virginitate*, 20, MPG, 28, 276C (cf. 276D); T. Balsamon, MPG, 137, 269D, 272ABC, 273ABC, 276AB (Bals., Zonaras, Aristenus on Can. 11 f., Nic. I), 1205D–1209B (B., Z., A. on Can. 5, Neocaes.); cf. 138, 845C (On Basil, *ad Amph.*); M. Blastares, *Syntagma alphabeticum*, K, 10, and K, 28, MPG, 144, 1364B, 1381BC (μετάνοιαι). Cf. E. Schwartz, *Bussstufen u. Katechumenatsklassen* (*Schriften d. wiss. Gesellschaft in Strassburg*, 7 [Strassb., 1911]), 25 and *passim*; Karl Holl, *Enthusiasmus u. Bussgewalt beim griechischen Mönchtum* (Leipzig, 1898), 225 ff., 245, 287, 299, and *passim*; E. Amann, *s.v.* Pénitence, DTC, 12.1 (1933), 790–96, 844 f.; H. Leclercq, *s.v.* Génuflexion, DACL, 6.1 (1924), 1017–19.

The text of the Pentecostal rite is to be found in the various editions of the Πεντηκοστάριον and the Εὐχολόγιον. 'Il vespero della γονυκλισία,' *Roma e l'Oriente*, 2 (1911), 81–9; P. de Meester, *Riti e particolarità liturgiche del Triodio e del Pentecostario* (Rome, 1943), 77 f.; cf. F. Heiler, *Urkirche u. Ostkirche* (Munich, 1937), 356 f.

See the description of the *Liturgy of the Presanctified* by Sévérien Salaville, *Liturgies orientales*, II. *La Messe*, vol. 2, pt. 1 (Paris, 1942), 108–10, 116 f., 126, whose account differs in some details, probably because of local differences, from that of J. D. Ştefănescu, *L'illustration des liturgies dans l'art de Byzance et de l'Orient* (Paris, 1936), 167–71. Prostration is prominent also in the Latin service of the *Adoratio crucis* on Good Friday.

the form of kneeling on Sundays and of touching the forehead to the ground [from a kneeling position] on other days (*capite nudato in genua provoluti, si fuerit dies Dominica; si dies alia, omnes in frontem ad terram usque prosternentur, deposita capitum fascia*).[404] Further hints can be found in the very similar distinction made by Constantine VII Porphyrogennetus in the *De ceremoniis* for the adoration of the emperor on Sundays and week days (*καὶ εἰ μὲν οὐκ ἦν κυριακή, ἔπιπτον κάτω, προσκυνοῦντες τοὺς δεσπότας . . . εἰ δὲ ἦν κυριακή, οὐκ ἔπιπτον κάτω προσκυνοῦντες, ἀλλὰ μέχρι τῶν γονάτων ἐποίουν τὸ σέβας τῆς προσκυνήσεως*), where, however, the *προσκύνησις* on Sunday seems to have been only a profound bow.[405] But even more illuminating are the representations of the *προσκύνησις* in Byzantine miniatures, mosaics, and ivories, for they conform exactly to Pletho's specifications and illustrate the kind of ceremonial prostration with which Pletho was familiar and which inspired the ritual that he devised for the worship of Zeus.[406]

[404] Quoted by Eusebius Renaudot, *Liturgiarum orientalium collectio*, 1 (2d ed., Frankfurt–London, 1847), 246. For the Latin Church, see Peter Browe, 'Die Elevation in d. Messe,' JLW, 9 (1929), 45 ff., who cites texts to show that in the Middle Ages kneeling on one knee was considered insufficient in divine worship, though proper in obeisance before earthly rulers. See also E. Mangenot, *s.v.* Élévation, DTC, 4.2 (1911), 2320–28. For the modern liturgy in general, see F. Mercenier and F. Paris, *La prière des églises de rite byzantin*, 2 vols. (Prieuré d' Amay-sur-Meuse, 1937–39); and any of the numerous editions of the *Liturgy of St. Chrysostom* by Placide de Meester.

[405] Ed. I. I. Reiske, 1 (Bonn, 1829), 161.23–162.4 (cf. 66.14–17). Reiske, 2 (*ibid.*, 1830), 418 f., maintains that the Sunday *προσκύνησις* was an obeisance on the knees, with head touching the floor, but one of the texts he cites (1, 172.5–7), *προσκυνεῖ τὸν βασιλέα, μὴ τελέως πίπτων κάτω, ἀνθ' ὧν βαστάζει τὰ σύμβολα*), does not seem to support his interpretation. A detailed monograph on the Byzantine *προσκύνησις* and all its varieties is greatly to be desired. André Grabar, *L'empereur dans l'art byzantin* (Paris, 1936), 85 ff., 101 ff., and A. Alföldi, 'Die Augestaltung des monarchischen Zeremoniells am römischen Kaiserhofe,' *Mitteilungen des deutschen archaeologischen Instituts, Roemische Abteilung*, 49 (1934), 45 ff., though valuable, do not deal with the subject as a whole, the former treating only representations of the emperor in art, and the latter confining itself to the earlier imperial period. Not without interest, though not original, and limited almost exclusively to the *De ceremoniis*, is Otto Treitinger, *Die oströmische Kaiser- u. Reichsidee nach ihrer Gestaltung im höfischen Zeremoniell* (Jena, 1938), 81, 84–90, 175, 181, 198, 201, 222 f., 228.

[406] For literary references to the *προσκύνησις*, see the liturgies *passim*; Constantine Porphyrogennetus, *De ceremoniis*, 1 (Bonn, 1829), 8.7 f., 14.20–15.15, 23.11 ff., 76.7–23, 93.7, 10, 94.9 ff., 120.4–21, 229.20 ff., 232.6, 11 ff., 233.1 ff., 235.9, 238.6 ff., 239.5 f., 520.10 ff., etc.; Nicholas Cabasilas, MPG, 150, 420BCD, 425B, 453B, etc.; Symeon of Thessalonica, MPG, 155, 348C, 352D, 368C, 373B, 388C, 401A, 408C, 432C, 440D, 448A, 449B, 452ABC, 491C, 493D, 524A, 529A, 608D, 728D, 729AB, etc. Cf. ps.-Athanasius, *De virginitate*, 21, MPG, 277C; Theodore of Andida, *Commentatio liturgica*, 37, MPG, 140, 464C; cf. Anonymi auctoris, *Expositio officiorum ecclesiae, Georgio Arbelensi vulgo adscripta*, 4, 19, ed. R. H. Connolly, CSCO, Ss. Syri, series secunda, 92, *Versio* (Rome, 1915), 44.9–45.15; Connolly and Codrington, *Two commentaries* (see n. 399 *supra*), 19.5 ff., 62.29–63.8, 64.25 ff., 97.19–27. N.B.: J. Ébersolt, 'Mélanges d'histoire et d'archéologie byzantines, 1, Études sur la vie publique et privée de la cour byzantine,' *Revue de l'histoire des religions*, 76 (1917), 37 f.

For the *προσκύνησις* in Byzantine art, see an emperor before Christ (9th c. ?), Thomas Whittemore, *The mosaics of St. Sophia at Istanbul*, 1 (Oxford, 1933), pl. 12 and 14; the peni-

The other liturgical gestures of the *Nomoi*, except for the use of the hands in touching the ground, which seems to be pagan in origin (p. 259 *supra*), are also Byzantine. The upward look and the lifting of the arms in prayer are well attested in literary and liturgical texts.[407] And, as for kneeling of various kinds, apart from the types above-mentioned, the pseudo-Dionysius the Areopagite (an author known to Pletho: see n. 35 *supra*), in his περὶ τῆς ἐκκλησιαστικῆς ἱεραρχίας (*De ecclesiastica hierarchia*), notes that at ordination deacons kneel on one knee and that priests and bishops kneel on both knees, the bishop carrying on his head τὰ θεοπαράδοτα λόγια (the Gospels), and the right hand of the celebrant resting on the head of the candidates of all ranks. In annotating these passages, Maximus the Confessor (fl. 650) remarks that he did not know on which knee the deacon knelt in the time of 'Dionysius' (ἕνα τῶν ποδῶν. ἄδηλον ποῖον πόδα φησί), and that a part of the service, which he labels only as ἄμφω τὼ πόδε ('both knees'), was performed differently in his day (νῦν ἑτέρως ἐπιτελεῖται). George Pachymeres (d. *ca.* 1310) in his scholia on the same texts follows the words of 'Dionysius' very closely and gives no hint of any divergence of practice, while Symeon of Thessalonica (d. 1429) in his περὶ τῶν ἱερῶν χειροτονιῶν says that at the ordination of the deacon, the candidate kneels on one knee (with forehead leaning on the Holy Table), and that higher ecclesiastics at their ordination kneel on both knees (again with forehead resting upon the Holy Table).[408] Kneeling, also, on one knee or two, must have accompanied

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tence of David (*Par. Gr. 139*, 10th c.: f. 136^{v}): Henri Omont, *Miniatures des plus anciens mss. grecs de la Bibliothèque Nationale du vi^{e} au xiv^{e} siècle* (Paris, 1929), pl. 8; the veneration of St. Nicholas, a miniature in *Codex Reginensis Graecus 1* (10th c.), f. 3, *Collezione Paleografica Vaticana*, fasc. 1, *Miniature della Bibbia, Cod. Vat. Regin. Greco 1* . . . (Milan, 1905), pl. 5; *Codices e Vaticanis selecti phototypice expressi*, 8, *Il Menologio di Basilio II*, 2 (Torino, 1907), 3, 112, 321, etc.; Ernest T. DeWald, *The illustrations in the mss. of the Septuagint*, 3.1 (Princeton, 1941), 90^{v}, 126^{v}, 135^{r}, 215^{r}, 235^{r}, and *passim* (12th c.); 3.2 (*ibid.*, 1942), 44^{r}, 45^{r}, 197^{v}, 447^{r}, and *passim* (11th c.); Adolph Goldschmidt and Kurt Weitzmann, *Die byzantinischen Elfenbeinskulpturen des X.–XIII. Jahrhunderts*, 2 (Berlin, 1934), pl. 4, no. 14, pl. 23, no. 59, pl. 34, no. 86.

Reiske, *loc. cit.* (n. 405 *supra*), argues that the προσκύνησις before the emperor ordinarily took the form of a complete prostration on the ground, with arms and legs stretched out. But this type is hardly ever seen in the arts: cf. *Il Menologio di Basilio II*, vol. 2, 108. Cf., however, Brightman, *op. cit.*, 471.2: οἱ κατηχούμενοι χάμαι κεῖνται, and 472.30: πάντες ὁμοίως ἐπ' ἐδάφους κεῖνται (for prayer). See also A. M. Schneider, 'Das Martyrion der Hl. Euphemia beim Hippodrom zu Konstantinopel,' BZ, 42 (1942), 181, pl. 3, fig. 6.

[407] Mark of Ephesus, MPG, 160, 1165C; F. J. Dölger (for earlier texts), *op. cit.* (n. 381 *supra*), 301–20.

[408] MPG, 155, 376AB, 377BC, 388AB, 413D, 452D. Ps. – Dionysius, *De eccl. h.*, 5.7.2, 5.7.3.1–2, 5.7.3.7 f., MPG, 3, 509A–D, 516AB; Pachymeres, *ibid.*, 525BCD, 529BC; Maximus, MPG, 4,165BC, 167BC. Some of these texts are discussed in J. M. Hanssens, 'La forme sacramentelle dans les ordinations sacerdotales de rit grec,' *Gregorianum*, 5 (1924), 254; *ibid.*, 6 (1925), 52, 65 ff., 75. 'Dionysius' and Pachymeres (MPG, 3, 533ABC, 545BCD) say that

the various ceremonies in both Church and Court which called for the osculation of the knees (or knee) of the presiding cleric or emperor, or of both knees of the emperor and one each of the Caesars who sat on either side of him.[409] In Byzantine art we find numerous examples of kneeling on one knee, with countenance and both arms upraised in prayer or entreaty,[410] or with face and one arm raised (Peter at the scene of the Transfiguration, and in the Stoning of St. Stephen),[411] and of suppliants, martyrs, and worshippers kneeling on both knees.[412] In *Codex*

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monks did not kneel at initiation. They did so, however, according to the Armenian rite (F. C. Conybeare, *Rituale Armenorum* [London, 1905], 140), and in the Latin West they prostrated themselves before the altar (O. Casel, 'Die Mönchsweihe,' JLW, 5 [1925], 35, 39).

Leclercq, without citing texts (*s.v.* Génuflexion, DACL, 6.1 [1924], 1018; cf. the similar statement of C. S., 'De genuflexione,' *Ephemerides liturgicae*, 39 [1925], 301–4), says that Maximus the Confessor takes special pains to explain the 'prostration' alluded to by 'Dionysius' as nothing more than kneeling. What Leclercq had in mind, no doubt, is the passage in which 'Dionysius' mentions the ὑπόπτωσις of the candidates for ordination before the altar, but the context shows that 'Dionysius' had reference to kneeling, not to prostration; and this is all that Maximus meant by his scholium: ὑπόπτωσις· ὑπόπτωσις ἡ γονυκλισία.

[409] MPG, 155, 409C, 436ABD, 465B: Constantine Porphyrogennetus, *De ceremoniis*, 1 (Bonn, 1829), 221.8 ff., 228.6 ff.

[410] *Il Menologio di Basilio II*, vol. 2, 60, 76, 85, 128, 230, 370. For kneeling on one knee in pagan literature, see Aelius Aristides (129–89), *Oratio* 4 (26), 39 f., ed. Bruno Keil, *Aelii Aristidis Smyrnaei, quae supersunt omnia*, 2 (Berlin, 1898), 435.32 f.: καὶ ἔδει τὸ γόνυ τὸ δεξιὸν κλίναντα ἱκετεύειν τε καὶ καλεῖν Λύσιον τὸν θεόν. In pagan art there are representations (later than the second century) of Mithraic initiates kneeling on one knee, on two knees, and in what appears to be a full προσκύνησις, with the worshipper completely stretched out on the ground: ed. A. Minto, 'S. Maria di Capua Vetere,' *Notizie degli Scavi*, 21 (1924), 371 (fig. 13), 373 (fig. 15), 374 (fig. 16); cf. (? initiate on two knees) at Negrar di Valpolicella, ed. T. Campanile, *ibid.*, 19 (1922), 348 (fig. 1), 353 (fig. 5). In Haas, *Bilderatlas* (see n. 400a), 9.–11. Lfg., fig. 54 (Isiac), 170 (Bacchic), one of the figures in each group is kneeling on one knee, the other on two knees. See also Kurt Weitzmann, *Illustration in roll and codex* (Princeton, 1947), Tabulae Iliacae (first century): fig. 8 (Circe kneeling before Odysseus [no longer extant]), fig. 31 (Thetis kneeling before Zeus). In the religion of pagan Egypt kneeling was very common: Haas, *Bilderatlas*, 2.–4. Lfg. (Erlangen-Leipzig, 1924), 16, 49, 60, 63, 66, 75, 86 f., 92, 109, 120, 127 f., 131 f., 138; Heinrich Schäfer, *Amarna in Religion u. Kunst* (Berlin, 1931), pl. 45 (woman on both knees, with both arms raised, man kneeling on one knee, with one arm raised). To Carl Schneider, 'Das Fortleben d. Gesamtantike in den griechischen Liturgien,' *Kyrios*, 4 (1939–40), 203 f., I owe the references to Schäfer and to *Not. d. Sc.* Cf. Sittl, *op. cit.* (n. 400a *supra*), 157.

[411] *Miniatures of Moni Iviron* (*Mount Athos*), edd. G. Tsimas and Papahadzidakis, 1 (Athens, n.d.), *Cod.* 1, no. 10; *Cod.* 5, no. 39; Ernst Diez and Otto Demus, *Byzantine mosaics in Greece: Hosios Lucas & Daphni* (Cambridge, Mass., 1931), pl. 89, 91 (*ca.* 1080); Florence, Laurent. Plut. IX, 28 (f. 113^{r}) in Kurt Weitzmann, *Die byzantinische Buchmalerei des 9. u. 10. Jahrhunderts* (Berlin, 1935), pl. 45, no. 266.

[412] Omont, *op. cit.*, pl. 33 (hands stretched out), 45, 49 (*Par. Gr. 510*, 9th c.: ff. 143^{v}, 310^{v}, 347^{v}), 92, cf. 96 (hands stretched out: *Par. Gr. 54*, 14th c.: ff. 35^{v}, 213), 116 (*Coislin. Gr. 239*, 12th c.: no. 11), 119 (*Par. Gr. 543*, 14th c.: 23^{v}); *Il Menologio di Basilio II*, vol. 2, 14; DeWald, *op. cit.*, 3.1, 17^{r}, 66^{r}, 96^{r}, 106^{v}, 126^{v}, 160^{r} (hands and eyes up). Theodore Metochites kneeling before Christ with a model of Kahrié-Djami (monastery church of Chora: beginning of 14th c.), Charles Diehl, *La peinture byzantine* (Paris, 1933), pl. 40; *idem*,

Marcianus Graecus 17 (eleventh century), eight Bulgarians (so Grabar) are shown before the Emperor Basil II Bulgaroctonus in various attitudes of adoration (or submission), two kneeling on one knee, two on both knees, and four in full prostration.[412a]

Prayer is often described in the texts, and represented in art, as being offered from a standing position.[413] Not infrequently, however, it was accompanied by kneeling. Prayer in the New Testament[414] is offered both standing and kneeling, and the language of the twentieth canon[415] of the Council of Nicaea (325), which forbade kneeling for prayer on Sunday and during the period between Easter Sunday and Pentecost, seems to imply that at other times Christians were expected to pray on bended knee. This implication is fully borne out by a number of Byzantine theologians, including Irenaeus (fl. 170), Basil of Caesarea (fl. 350), Nilus Monachus (fl. 450), Theodore the Studite (d. 826), and Theodore Balsamon (d. after 1193), who make it clear that Christians prayed standing on Sunday (because it was the day of resurrection) but knelt down on other days. In the words of Nilus Monachus: *τῇ κυριακῇ ἡμέρᾳ ἑστῶτες εὐχόμεθα . . . ἐν δὲ ἄλλαις ἡμέραις τὰ γόνατα κλίνομεν.*[416] Moreover, the faithful in the

Manuel d'art byzantin, 2 (2d ed., Paris, 1926), fig. 396; Manuel Palaeologus, with hands raised to the Virgin, Gabriel Millet, *Monuments byzantins de Mistra* (Paris, 1910), pl. 91.3.

[412a] S. Lampros, *Λεύκωμα βυζαντινῶν αὐτοκρατόρων* (Athens, 1930), pl. 56. Cf. Grabar, *op. cit.*, pl. 12.2 (base of obelisk of Theodosius I), 14 (base of column of Arcadius); Alföldi, *loc. cit.*, 57 (personification of London on one knee before Chlorus, and woman doing obeisance on one knee).

[413] *De ceremoniis, ed. cit.*, 1, 475.6 f.; Nicholas Cabasilas, MPG, 150, 489A; Symeon of Thessalonica, MPG, 155, 588A; Brightman, *op. cit.*, 131.8 (*οἱ καθήμενοι ἀνάστητε*), 373.3 ff. *Il Menologio di Basilio II*, vol. 2, 65, 98, 107, etc.; cf. Dölger, *op. cit.* (n. 381 *supra*), 326 ff.

[414] Passages collected and discussed by Horst, *op. cit.* (n. 400a *supra*).

[415] J. Hefele-Leclercq, *Histoire des conciles*, 1.1 (Paris, 1907), 618–20.

[416] Irenaeus (*apud* ps.-Justin, *Quaestiones et resp. ad orth.*), ed. W. W. Harvey, 2 (Cambridge, 1857), 478, fr. 7=MPG, 6, 1364AB; Basil, *De spiritu sancto*, 66, MPG, 32, 192ABC; Nilus Monachus, *Epistolae*, 3, 132, MPG, 79, 444D; Theodore the Studite, *Responsiones*, 2, MPG, 99, 1372AB; Theodore Balsamon, MPG, 137, 308C–309C (Bals., Zonaras, Aristenus on Can. 20, Nic.), 821BCD, 824A–825A (B., Z., A. on Can. 90, In Trullo); MPG, 138, 516CD (B., Z. on Can. 15, *Ep. Can. Pet. Alex.*), 844D–845C (B. on Basil, *Ad Amph.*); Matthew Blastares, *Syntagma alphabeticum*, K, 37, MPG, 144, 1389D, 1392D–1393A, cf. 1333D [E, 35]; ps.-Basil, *Historia mystagogica ecclesiastica*, 11f., ed. F. E. Brightman, JTS, 9 (1907–8), 260.18 ff.; ps.-Cyril of Jerusalem, *Historia ecclesiastica et mystagogica*, 9, ed. N. F. Krasnosel'tsev, 'O drevnikh liturgicheskikh tolkovaniiakh,' *Lietopis' Istoriko-filologicheskago Obshchestva pri Imp. Novorossiiskom Universitetie*, 4, *Vizantiiskoe Otdielenie*, 2 (Odessa, 1894), 242.15–243.6; ps.-Sophronius of Jerusalem, *Commentarius liturgicus*, 5, ed. Krasnosel'tsev, *loc. cit.*, 203.10 ff.=MPG, 87.3, 3985C; ps.-Germanus of Constantinople, *Rerum ecclesiasticarum contemplatio*, MPG, 98, 392C; Anonymi auctoris, *op. cit.*, 2, 21 (*loc. cit.* in n. 406 *supra*), 91, *Versio* (Rome, 1913), 158.20 ff., 159.9 ff.; Connolly and Codrington, *op. cit.* (n. 406 *supra*), 19.9 ff.; R. H. Connolly, *The liturgical homilies of Narsai* (*Texts and Studies*, ed. J. Armitage Robinson, 8, 1 [Cambridge, Eng., 1909]), 22 f. Cf. Epiphanius, *De fide*, 22, 5 ff., ed. K. Holl, 3 (Leipzig, 1933), 523.5 ff.=MPG, 42, 828A ff. On ps.-Sophronius and ps.-Germanus, see

Clementine Liturgy are summoned to prayer with the injunction, κλίνωμεν γόνυ (let us kneel),[417] and a ninth century form of the *Liturgy of St. Chrysostom* contains, among the prayers for the faithful, the words, πάλιν καὶ πολλάκις σοὶ προσπίπτομεν καὶ σοῦ δεόμεθα (again and again we fall down before thee and beseech thee),[418] where, however, προσπίπτομεν need not necessarily be taken literally. According to Symeon of Thessalonica, the priest kneels at certain points in the liturgy when he prays, and kneeling is associated with prayer not only by Mark of Ephesus in the treatise above cited, but also in a great many other texts throughout the Middle Ages, although there were a few, like the Ἀγονυκλῖται, an heretical sect mentioned by John of Damascus, whose members would not kneel at prayer (οἱ ἐν παντὶ καιρῷ τῶν προσευχῶν γόνυ μὴ θέλοντες κλίνειν ἀλλ' ἑστῶτες ἀεὶ τὰς προσευχὰς ποιούμενοι). But the Agonyklitae were exceptional, as was the practice of the Syrian Monophysites, who, we learn from the commentary of Dionysius Bār Salībī (d. 1171) on the *Liturgy of St. James*, forbade kneeling during the liturgy because it was a sign of man's fall, while the liturgy, like Sunday, was a symbol of the resurrection.[419]

Communal kneeling on a large scale, as in the *Nomoi*, is implied by Theodore the Studite, who notes in his essay on the *Liturgy of the Presanctified* that 'the brethren kneel, as they do in prayer' (τῶν ἀδελφῶν τὸ γόνυ κλινομένων, ὃ καὶ ἐν ταῖς εὐχαῖς τοῦτο γίνεται), when the priest says κατευθυνθήτω (in beginning to quote Ps. 140:2).[420] Mass prostration can be illustrated from the treatise of Abu Saba, from the *De ceremoniis* (which describes adoration and homage paid to the emperor by groups of courtiers),[421] from the Ἀκολουθία τῆς γονυκλισίας, from the *Liturgy of the Presanctified*,

Brightman, *loc. cit.*, 248 ff.; Krasnosel'tsev, *loc. cit.*, 178 fl. On ps.-Justin (*ca.* 340), see G. Bardy, 'La littérature patristique des "*Quaestiones et responsiones*" sur l'écriture sainte,' *Revue Biblique*, 42 (1933), 211 ff.

[417] Brightman, *op. cit.*, 9.26 f.; *ibid.*, 159.3 f., 11 f. (Coptic rite).

[418] *Ibid.*, 317.9 f.

[419] MPG, 155, 324BC, 328C; MPG, 160, 1165CD, 1192BC; cf. ps.-Germanos, *op. cit.*, MPG, 98, 408A. Cf. the ἐπιγονάτιον (ὑπογονάτιον): J. C. Suicerus, *Thesaurus ecclesiasticus e patribus Graecis* (2d ed., Amsterdam, 1728), 1, 1163; 2, 1386; MPG, 155, 260A, 261D–263A, 412BC, 713BC. See also the text ed. A. Dmitrievskiĭ, *Opisanie liturgicheskikh rukopiseĭ khraniâshchikhsiâ v Bibliotekakh Pravoslavnago Vostoka*, 2 (Kiev, 1901), 302.17 ff.

John Chrysostom, *In II Cor., Homilia* 18, MPG, 61, 527 (ἐπ' ἐδάφους κείμεθα); Epiphanius, *De fide*, 24, 6, ed. Holl, 3, 525.15 ff.=MPG, 42, 832A; *Constitutiones Apostolorum*, 8, 10, 2, ed. Funk, 1, 488.7; Εὐχολόγιον Σαραπίωνος, 12, *ibid.*, 2, 170.12 ff. (εὐχὴ γονυκλισίας); Callistus Telicoudes (14th c.), *De oratione et attentione*, MPG, 147, 832B. Anonymi auctoris, *op. cit.* (in n. 406 *supra*), 3, 6, *loc. cit.*, 91, 187.5 ff.; 4, 28, *ibid.*, 92 (1915), 83.28–84.13; R. H. Connolly, *Liturgical homilies of Narsai* (see n. 416 *supra*), 39.

John of Damascus, *De haeresibus*, 91, MPG, 94, 757B; Dionysius Bār Salībī, *Expositio liturgiae*, ed. H. Labourt, CSCO, Ss. Syri, 2d S., 93, *Versio* (Paris, 1903), 64.12 ff.

[420] MPG, 99, 1689A; Brightman, *op. cit.*, 346.13–16.

[421] *Ed. cit.*, 1, 232.15–18, 233.14 ff.

and from a number of passages in the liturgical commentaries of Symeon of Thessalonica.[422]

Mention should also be made of the congregational prostrations (*μεγάλαι προσκυνήσεις*) provided for by the rubrics of the *Ὡρολόγιον* (the service book which gives the liturgy for the canonical hours), and of the rite described in the *Typikon* of the Empress Irene (n. 402a *supra*).

From all this it is clear that Pletho's *proskynesis*, compounded of both pagan and Christian elements, was thoroughly Greek in conception and execution. Despite superficial similarities, it has no discoverable connections with Islam. In the Muslim ṣalāt (the ritualistic prayer, which is repeated five times daily), there are no parallels for the kneeling on one knee,[422a] the use of the right and left hands, and the triple prostration that are called for in the *Nomoi*. In addition, the Muslim service differs from the Plethonic in a number of important respects: in the language and manner of the call to prayer by the muezzin from the minaret, the contents and mode of recitation of the prayers themselves, the orientation of the worshipper towards Mecca, the gesture of touching the lobes of the ears, the deep bow in a standing position with hands placed on the knees, and the inclination of the head toward the right and left shoulders.[423] Pletho says nothing about the ablution of the face, hands, and feet, by which the Islamic ṣalāt is always preceded, nor is there anything in his liturgy which resembles the prayers recited by the Muslims during each of the prescribed postures.

2. HYMNS AND MUSIC

In both matter and style, Pletho's hymns, which are in dactylic hexameters, closely resemble the pedantic hymns of Proclus and the pseudo-Orpheus, of which Pletho was so fond that he transcribed five of the former and fourteen of the latter by his own hand.[424] In making a place for these hymns in his system, Pletho was cleaving to the precepts of medieval pagans like Julian and Proclus, the former of whom advised pagan priests to study

[422] MPG, 155, 352D, 440D, 448A, 452ABC, 608D, 728D, etc.

[422a] Cf. the miniature in an Arabic astrological Ms. of a man kneeling on one knee while sacrificing to a star: F. Boll, C. Bezold, W. Gundel, *Sternglaube u. Sterndeutung* (4th ed., Berlin, 1931), pl. 24, fig. 47.

[423] Edward W. Lane, *An account of the manners and customs of the modern Egyptians*, 1 (London, 1837), 103–29 (with illustrations of Muslim gestures of prayer); A. J. Wensinck, *s.v.* Ṣalāt, *Encyclopaedia of Islam*, 4 (Leiden-London, 1934), 96–105; T. W. Juynboll, *s.v.* Prayer (Muhammadan), ERE, 10, 196–99. See above all Thomas P. Hughes, *Dictionary of Islam* (London, 1885), *s.v.* Prayer, 464 ff., with illustrations, etc.

[424] Morelli, *Bibliotheca manuscripta*, 271. For the hymns of the pseudo-Orpheus, see Otto Kern, ed., *Orphicorum fragmenta* (Berlin, 1922); E. Abel, ed., *Orphica et Procli hymni* (Leipzig, 1885); for those of Proclus, A. Ludwich, ed., *Eudocia Augusta, Proclus Lycius, Claudianus*, etc. (Leipzig, 1897), 115–56.

the hymns in honor of the gods and commit them to memory, and the latter of whom recited hymns of his own composition to his students.[425] Each of the hymns of the *Nomoi* was to have been accompanied by music, the range of which was limited to four modes, bearing the ancient names in adverbial form (*ὑποφρυγιστί, φρυγιστί, ὑποδωριστί, δωριστί*).[426] This nomenclature derives, at least in part, from Pletho's studies of Aristoxenus and Aristides Quintilianus, whose works on music he had excerpted,[427] and has some affinity, also, with the section of the *Republic* (3, 398E–399C), in which Plato withholds sanction from all but the Dorian and Phrygian modes. But in reserving parts of his hymns for some days and parts for others, and in assigning modes to various hymns and days in the religious calendar, he was imitating Byzantine liturgical practice, and adapting for his own purposes the familiar rubrics of the Greek rite, patterning his four modes upon the eight *ἤχοι*[427a] of the Christian liturgy, which Manuel Bryennius and John Cucuzeles in the fourteenth century had already equated with the eight modes of their pagan forbears.[428]

XIV. CONCLUSION

There is no aspect of Pletho's calendar, the foregoing analysis fully demonstrates, which does not bear the stamp of Greek influence. This is obvious

[425] Julian, *Fragmentum epistolae*, 301D–302A, ed. Wright, 2, 328; Marinus, *Vita Procli*, 19–20 (33.26 ff., 36.15 f., 21 f.; cf. 44.15 f., 48.5 f., etc.); on Julian's hymns, see Gregory of Nazianzus, *Oratio 4* (*Contra Julianum* 1), MPG, 35, 648C. Cf. M. P. Nilsson, 'Pagan divine service in late antiquity,' HTR, 38 (1945), 63–9.

[426] Alexandre, 232, 234, 236. Cf. Johannes Quasten, *Musik u. Gesang in den Kulten d. heidnischen Antike u. christlichen Frühzeit* (*Liturgiegeschichtliche Quellen u. Forschungen*, Heft 25 [Münster in Westf., 1930]), 3–9, 33 ff., 51 ff., and *passim*; note also the Christian strictures against pagan music (*ibid.*, 81 ff., 168, 183, etc.).

[427] Fabricius-Harless, *Bibliotheca Graeca*, 12, 92. Cf. Aristoxenus, ed. and transl. H. S. Macran, *Harmonics of Aristoxenus*, 2, 37 f. (Oxford, 1902), 128.6–129.2; Aristides Quintilianus, ed. Marcus Meibom, *Antiquae musicae auctores septem*, 2 (Amsterdam, 1652), 18–25 and *passim*. Cf. Plutarch, *De musica*, 8, 11, 15–17, 19, 33, 44; Ptolemy, *Harmonica*, 2, 11 and 15, ed. J. Wallis, *Opera mathematica*, 3 (Oxford, 1699), 72 ff., 92 ff.; ed. Ingemar Düring, *Göteborgs Högskolas Årsskrift*, 36.1 (1930), 64 ff., 74 ff.; George Pachymeres, *Quadrivium* (see n. 124 *supra*), 109.12 ff. Porphyry's commentary on Ptolemy's *Harmonica* does not mention the Hypophrygian or Hypodorian modes: see *index verborum* in the edition by Ingemar Düring, *Porphyrios Kommentar zur Harmonielehre des Ptolemaios*, *Göteb. Hög. År.*, 38 (1932:2).

[427a] Lorenzo Tardo, *L'antica melurgia bizantina* (Grottaferrata, 1938), 362 ff.; H. J. W. Tillyard, *Handbook of the middle Byzantine musical notation* (*Monumenta musicae Byzantinae*, 1, 1 [Copenhagen, 1935]), 30 ff.; Egon Wellesz, *Trésor de musique byzantine*, 1, 1 (Paris, 1934), 14, 22; W. Christ and M. Paranikas, *Anthologia Graeca carminum Christianorum* (Leipzig, 1871), cxviii ff.

[428] Manuel Bryennius: *Harmonica*, 3, 4, ed. J. Wallis, *loc. cit.*, 481 ff. and *passim*; John Cucuzeles (*ca.* 1300): H. J. W. Tillyard, 'A Byzantine musical handbook at Milan,' JHS, 46 (1926), 220.4, with bibliography on 219 f. A. J. H. Vincent in an appendix to Alexandre, 467 ff., gives his version of the musical equivalents of Pletho's four modes.

not only in the astronomical presuppositions which underlie it – in the structure and character of the luni-solar year which it embodies – but also in matters of detail. The combination of the seven-day lunar week and the heortological scheme which depends upon it with the ancient Solonian calendar and the regressive counting of days in the second and fourth weeks of the month – Pletho's chief innovation – represents an attempt to make use of two different pagan Greek models simultaneously. Given the seven-day week and the calendar of Solon, it is difficult to see how they could have been combined in any other way.

Despite his hostility for the *σοφισταί*,[429] as he called the Christians, Pletho was never able altogether to break away from the rites and practices of the Greek Church, in which he had been born and reared, and his subconscious mind retained elements of the Christian divine service, which he automatically reproduced when he found himself in a liturgical context, as is evident from the reminiscences of the Christian liturgy cited above, and also from the use of evening as the time for beginning the celebration of the *ἱερομηνίαι*, which, according to the chapter on the calendar, would not begin until the hour of midnight.

[429] Alexandre, 32.27, 34.1 ff., 126.10, 256.26 ff.; cf. George Scholarius, edd. Petit, etc., 4, 154.26–30.

PART II. PLETHO AND ISLAM

I. INTRODUCTION

Now that the evidence for Pletho's dependence upon Greek sources has been completed, it may be of interest to examine Täschner's theory of Pletho's indebtedness to Islam, and the arguments advanced to support it.[430] In presenting this hypothesis, Täschner is careful to point out that he is an Arabist, not a Byzantinist, and appeals to students of Byzantine literature to put his conclusions to the test. After a brief review of the relations between the Greeks and the Turks in the Levant, he draws attention to the fact that Pletho spent some time (possibly from *ca.* 1380 to *ca.* 1390, as he suggests) in the court of Murad I and Bayazet I. There, he says, as the disciple of a Jewish scholar by the name of Elisaeus, Pletho made a study of Islamic custom and belief. The chronology of the early years of Pletho's life is not certain, and the text of George Scholarius on which this statement is founded does not indicate whether the court of the barbarians Pletho visited was Adrianople, the European capital, or Brusa, the capital in Asia Minor.[431] But there is no reason to doubt that Pletho did tarry a few years at Adrianople or Brusa until *ca.* 1390, when Elisaeus was burned at the stake, apparently for heterodoxy. At about this time, Pletho seems to have left Adrianople (or Brusa) for Constantinople, as Täschner says, and, possibly after a short stay in the capital, to have gone on to Mistra (*ca.* 1393), where he spent the concluding years of his life.

Täschner grants that there is no evidence that Pletho ever confessed to having used Muslim sources, but contends that, though Pletho's theoretical position was Greek, not Oriental, the *Nomoi* betrays Islamic influence in the selection and use of materials. Pletho's incorporation of metaphysics, ritualistic prescriptions, and a legal code within the framework of his system of religion is strictly Islamic in character, Täschner maintains, and is to be explained both as a reminiscence of the sojourn in Adrianople, and as proof of the conviction that the Byzantine state was disintegrating chiefly because the Byzantine Greeks lacked that intimate union of religion and law which was the characteristic feature of Islam. He looks upon Pletho's adoption of

[430] See the articles cited in n. 28 *supra*.

[431] See notes 477 and 479 *infra*.

the lunar month as in itself a mark of affinity with Islam, because of the rigidly lunar character of the Islamic year, and suggests that the model of the secret society he believes Pletho to have maintained for the instruction of an esoteric group of students is to be found in the heretical Futuwwa orders that had grown up around the fringes of orthodox Islam in the latter part of the fourteenth century.[432] Täschner makes much also of the Arabic translation of the extant portion of the *Nomoi* that dates from the reign of Bayazet II (1481–1512).

Before scrutinizing Täschner's hypothesis in detail, it should be noted that it is not the purpose of the present work to prove that Pletho was not acquainted with Muslims, or that he had no knowledge of Muslim institutions. He cites Averroes and Avicenna, the famous Muslim Aristotelian scholars, a number of times in his correspondence with Bessarion as witnesses to philosophical positions which he does not accept,[433] and an excerpt attributed to him (Μωαμὲτ ὁ Ἀράβων ἄρχων τε καὶ νομοθέτης) deals with the success of Muslim arms after the death of the Emperor Heraclius.[434] Moreover, even if he had never gone to Adrianople after the Turks had taken the city, he would have had ample opportunity to observe Muslim customs and practices in Constantinople. Muslim traders often visited the imperial capital, and the Emperor Manuel II (1391–1425) in Pletho's lifetime employed Turkish mercenaries;[435] but the mosque, which was probably erected in Constantinople in the latter part of the ninth century, seems not to have survived beyond 1204.[436]

The point is that Pletho was acquainted with Muslim ways, but rejected them. He looked down upon the Turks as βάρβαροι;[437] and is quoted by George of Trebizond as saying that the new religion which was to sweep the world would be unlike Christianity and Islam but identical with the religion of the ancients:

[432] BNJ, 8 (1929–30), 106 ff.

[433] MPG, 160, 890A, 982C (bis), 982D, 983A, 1006B (Averroes); 893A (Avicenna).

[434] Morelli, *Bibliotheca manuscripta*, 271; Fabricius-Harless, *Bibliotheca Graeca*, 12, 90.

[435] Ducas, *Historia Byzantina*, ed. I. Bekker (Bonn, 1834), 78.16, 194.8 ff.

[436] In *De administrando imperio*, 21 (MPG, 113, 209A, with note), Constantine VII Porphyrogennetus (913–59) dates this mosque from the time of Maslamah (715–17), but this has been doubted: F. W. Hasluck, *Christianity and Islam under the Sultans*, 1 (Oxford, 1929), 11; 2, 720; cf. 2, 717 ff., 726 ff.; Marius Canard, 'Les expéditions des Arabes contre Constantinople dans l'histoire et dans la légende,' *Journal Asiatique*, 208 (1926), 61–121, esp. 94–99. On references to Islam in Byzantine writers, see Wolfgang Eichner, 'Die Nachrichten über den Islam bei den Byzantinern,' *Der Islam*, 23 (1936), 133–62, 197–244; cf. Karl Dieterich, *Byzantinische Quellen zur Länder- u. Völkerkunde (5–15. Jhd.)* (*Quellen u. Forschungen zur Erd- u. Kulturkunde*, ed. R. Stübe, 5.1 [Leipzig, 1912]), 81–95; cf. 5.2, 12–49.

[437] See his letter to Emperor John VIII Palaeologus, ed. Lampros, Παλαιολόγεια καὶ Πελοποννησιακά, 3 (Athens, 1926), 309.6.

Audiui ego ipsum [*sc.* Plethonem] Florentiae, uenit enim ad concilium cum Graecis, asserentem unam eandemque religionem, uno animo, una mente, una praedicatione, uniuersum orbem paucis post annis esse suscepturum. Cunque rogassem, Christine an Machumeti? Neutram, inquit, sed non a gentilitate differentem . . . Percaepi etiam a nonnullis Graecis . . . palam dixisse ipsum, anteaquam mortem obisset . . ., non multis annis post mortem suam et Machumetum et Christum lapsum iri, et ueram in omnes orbis oras ueritatem perfulsuram.[438]

Moreover, Pletho preserved the ancient Greek names for the gods on purely nationalistic grounds, delighting in the traditions of the ancient Greeks and contemning all forms of innovation.[439] What he desired above all was the glory of Greece, and he addressed a number of works to the consideration of the means by which Hellas might be defended against the Turkish hordes.[440] The *Nomoi* itself is best understood as a philosophical elaboration of the program outlined in these writings, and was intended, like them, to restore Hellas to her pristine dignity and power. The Arabic translation of the extant remains of the *Nomoi*, though of great interest as a monument in the history of Plethonic studies, has absolutely no value as proof of the similarity between Pletho and Islam. On the contrary, the anonymous translator himself felt the need of pointing out in his introduction that Islam and the teachings of Pletho were diametrically opposed.[441]

II. THE *NOMOI*: RELIGION, METAPHYSICS, AND LAW

It is curious that Täschner deemed it necessary for a Greek to resort to Islam for inspiration in the formulation of the program set forth in the *Nomoi*. To begin with, Pletho was an undisguised polytheist, and polytheism is completely incompatible with Islam. This is not the place for a detailed summary of the *Nomoi*, Pletho's outline of his conception of the ideal state, nor is it possible here to make a comparison of the *Nomoi* and such

[438] See reference in n. 133 *supra*. The hypothesis of Guido de Ruggiero, *Storia della filosofia, Parte terza, Rinascimento, Riforma e Controriforma*, 1 (2d ed., Bari, 1937), 117 f., that Pletho was not a pagan, and that his paganism is nothing but a legend founded upon this remark of George of Trebizond, takes no account of the evidence of George Scholarius, and misses the plain meaning of the *Nomoi*. On George's hostility to Pletho see his fulsome letter to Mohammed II (whom he fawningly addresses as excellentissimum, inclytum optimumque imperatorem Romanorum sedem Constantini virtute sua et victoria divinitus sibi concessa obtinentem) and his ungracious reference to Pletho: Fuit quidam in Peloponeso, nescio si vir potius debeam dicere quam bestia, cui Gemistio nomen fuit, ed. Angelo Mercati, 'Le due lettere di Giorgio da Trebisonda a Maometto II,' *Orientalia Christiana Periodica*, 9 (1943), 97, cf. 85 ff., 92 ff.

[439] Alexandre, 32.25 ff., 130.5 ff., 256.8 ff.

[440] The best texts are those edited by Lampros, *op. cit.*, 3, 246–65, 309–12; 4, 113–35; for literature and discussion see D. A. Zakythinos, *Le despotat grec de Morée* (Paris, 1932), 175–80; S. Lampros, 'Ὑπόμνημα τοῦ καρδιναλίου Βησσαρίωνος,' Νέος Ἑλληνομνήμων, 3 (1906), 30, 35, 45, 49.

[441] BNJ, 8 (1929–30), 111 f.

works as the *Republic* and the *Laws* of Plato, which were his ultimate models. But no student of Greek literature can doubt that the *mélange* of law, science, metaphysics, theology, and ritualism which make up Pletho's *Nomoi* reflects the fact that for the pagan Greeks religion was by no means separate and distinct from ordinary pursuits, but an integral part of daily life which manifested itself in all that men did, thought, and felt. Except for a few mathematical and astronomical writers, there is hardly a Greek text, and seldom a monument of pagan Greek art, that does not have some relevance for the history of religions.[442]

III. THE MUSLIM LUNAR CALENDAR

Since the Greek sources of Pletho's calendar have already been discussed, it remains only to point out the features of the Muslim calendar [443] which are inconsistent with Pletho's system. As Täschner admits, Pletho's use of the solar year to check and balance the lunar month is a proof of Greek influence. Intercalation of a thirteenth month was forbidden by Mohammed in the Koran.[444] In addition, there are a number of features of Pletho's lunar calculations which are at variance with Muslim practice. In the first place, Mohammed ordained that the Arab month should be counted from the day of the first visual appearance of the crescent of the new moon. He expressly forbade determination of the beginning of the new month (of the day of the new moon) by astronomical calculation. 'We are illiterate people,' he said; 'we do not read nor do we reckon. . .' [445] Pletho on the other hand, in the tradition of Greek science, provides that the day of the new moon should be determined by the most skilful astronomers.[446]

[442] Cf. A. D. Nock, *Conversion* (Oxford, 1933), 272; Olivier Reverdin, *La religion de la cité platonicienne* (*École française d'Athènes. Travaux et mémoires*, fasc. 6 [Paris, 1945]).

[443] On the Muslim calendar, I have consulted, besides the sources cited *infra*: Ginzel, *Handbuch*, 1 (Leipzig, 1906), 238 ff.; Sherrard B. Burnaby, *Elements of the Jewish and Muhammedan calendars* (London, 1901). I found little of value in the *Encyclopaedia of Islam* or René Martin, *Mémoire sur le calendrier Musulman et sur le Hébraique* (Paris, 1867). For a brief statement on the Muslim calendar see George Chrysococces, Ἐξήγησις εἰς τὴν σύνταξιν τῶν Περσῶν, written in 1346, ed. H. Usener, *Ad historiam astronomiae symbola* (Bonn, 1876), 29 (*Kleine Schriften*, 3, 360). The latest work on this subject known to me is S. H. Taqizadeh, 'Various eras and calendars used in the countries of Islam,' *Bulletin of the School of Oriental and African Studies* (Univ. of London), 9 (1937–39), 903–22; 10 (1940–42), 107–32, which, however, does not deal with the problems discussed in this paper.

[444] Surah IX, 36 f.; Al-Biruni, *Chronology of ancient nations* [1000 A.D.], trans. Sachau, 14, 73 f.; see Axel Moberg, *An-nasī (Koran 9, 37) in der islamischen Tradition* (*Lunds Universitets Årsskrift*, N.F., Avd. 1, Bd. 27, Nr. 1 [Lund, 1931]).

[445] Al-Biruni, *op. cit.*, 76–78.

[446] Alexandre, 58.7 f. In addition to the astronomical works noticed *supra*, cf. Proclus, on Hesiod, *Works and Days*, 766 (418.12 ff.), who stresses the need of an accurate determination of the true conjunction (day of the new moon).

The Arab day begins at sunset,[447] Pletho's at midnight. Pletho's holidays usually come at the beginning of each period of seven days (on the first, eighth, fifteenth, twenty-second, twenty-ninth, and thirtieth); the Arab sabbath [448] (the *dies congregationis*, i.e., and not the day called 'sabbath,' which is only a relic of Hebrew nomenclature, completely devoid of heortological significance) falls on what would be Pletho's sixth day. Pletho's months are numbered, the Arab months have names;[449] and Pletho has nothing to correspond to the special festivals of the Arabs, which are scattered throughout the year [450] and do not come at regular intervals as Pletho's do. Finally, Pletho adopted a very individual, and in respect of sources, thoroughly Hellenic, method of counting the days of the month. The Muslims count their days either consecutively from one to thirty, or in groups of three,[451] or according to the method of the so-called *Consuetudo Bononiensis*. This last, which involves counting the days progressively from 1 to 15 (or 16 in a full month), and then regressively to the end of the month, has some point of contact with Pletho. But this system of computation is itself a derivative of the Greek retrogressive counting of days in the last decade of the month.[452] One type of Greek calendar was exactly reproduced by the Arab writers who numbered the days consecutively from the first to the twentieth, and backwards from the twenty-first to the end of the month.[453]

IV. SECRECY

Least of all would it have been necessary for Pletho to learn from the Muslims, orthodox or unorthodox, how to keep a secret, or the propriety of concealing those aspects of his teaching which might give offence from all

[447] Al-Biruni, *op. cit.*, 5; Muhamed Alfraganus (fl. 900 A.D.), *Chronologica et astronomica elementa*, ed. M. J. Christmann (Frankfurt, 1590), 8 f.; Ulug Beg (1393–1449), *Epochae celebriores astronomis, historicis, chronologis . . . usitatae ex traditione Ulug Beigi*, ed. Johannes Gravius (London, 1650), 3 f.; L.P.E.A. Sédillot, *Prolégomènes des tables astronomiques d'Oloug Beg, traduction et commentaire* (Paris, 1853), 8; cf. Ginzel, *Handbuch*, 1, 256 f.; S. B. Burnaby, *op. cit.*, 380.

[448] Alfraganus, *op. cit.*, 8; Al-Biruni, *op. cit.*, 76; S. B. Burnaby, *op. cit.*, 386.

[449] Al-Biruni, *op. cit.*, 70 f., 82, 325 ff.; Alfraganus, *op. cit.*, 7 f.; Ulug Beg, ed. Sédillot, 11; Ginzel, *Handbuch*, 1, 253; S. B. Burnaby, *op. cit.*, 475.

[450] Al-Biruni, *op. cit.*, 325 ff.; Ulug Beg, ed. Sédillot, 62 f.; Ginzel, *Handbuch*, 1, 272.

[451] Al-Biruni, *op. cit.*, 74 ff., 324 ff.; Ulug Beg, ed. Sédillot, 11, 20–26, 62.

[452] K. Vollers, *s.v.* Calendar (Muslim), ERE, 3 (N. Y., 1928), 127; Arthur Giry, *Manuel de diplomatique*, 1 (2d ed., Paris, 1925), 133; M. v. Sufflay, 'Der Ursprung der Consuetudo Bononiensis,' *Mittheilungen des Instituts f. österreichischen geschichtlichen Forschung*, 27 (1906), 481 f.; Franz Rühl, *Chronologie des Mittelalters u. der Neuzeit*, 75 f.

[453] E. Millosevich, 'Il calendario arabo,' *Bolletino della Reale Società Geografica*, Serie 5, 2.1 (1913), 12 f. For the Greek type imitated here, see Photius, *Lexicon*, *s.v.* Μουνυχιών, and Philochorus, περὶ ἡμερῶν, FHG, 1 (Paris, 1841), 414, no. 182.

but a selected group of disciples in whose discretion he had confidence. Caution in such matters is not peculiar to Islam. Moreover, wholly apart from the fact that it is by no means certain that Pletho actually did divide his students into esoteric and exoteric groups,[454] there are numerous Christian and pagan instances of such a distinction.

In the first place, Pletho could not have been ignorant of the early Christian practice of denying the Creed to catechumens until just before baptism, and other esoteric matters until after baptism.[455] The policy of withholding certain doctrines and practices from all but the baptized, which seems not to have been customary in the Church in the early centuries when the danger of persecution was great, became stricter when the clergy were forced to concentrate administrative and dogmatic authority in their hands, in order to deal effectively with gnosticism and other heresies.[456] The gnostics claimed to be the beneficiaries of a revelation that was denied to ordinary men;[457] and however theoretical or fictional this kind of secrecy may have been in the orthodox Church,[458] Bishop Cyril of Jerusalem (d. 386) observes in one of his catechetical orations that the mysteries of the Church are not explained to the heathen or to catechumens.[459] Similarly, in his famous treatise, *Ad Amphilochium*, which was the chief authority throughout the Middle Ages on the Procession of the Holy Spirit, widely quoted by both the Greeks and the Latins in support of their own views, especially during the Council of Florence (1438–9), Basil distinguishes between κηρύγματα, which are proclaimed to the world without reserve, and δόγματα, whose dissemination is limited to a select few.[460] This distinction is repeated by Eulogius, who had been Patriarch of Alexandria from 579–607 (as quoted in the *Bibliotheca* of the Patriarch Photius)[461] and by the canonist Theodore

[454] J. W. Taylor, *Georgius Gemistus Pletho's criticism of Plato and Aristotle*, 84 f.

[455] Origen, *Contra Celsum*, 1, 7, MPG, 11, 668B–669A, compares the gradation in the levels of Christian knowledge to the distinction the philosophers make between exoteric and esoteric doctrine.

[456] E. T. Horn, *s.v. Arcani Disciplina*, ERE, 1, 675 f.; J. P. Kirsch, *s.v.* Arkandisziplin, *Lexikon für Theologie u. Kirche*, 2d. ed., edd. K. Hofmann, M. Buchberger, 1 (1930), 652 f.; cf. A. Anwander, *s.v.* Schweigen, *ibid.*, 9 (1937), 374–76; E. Vacandard, *s.v.* Arcane, DHGE, 3 (1924), 1497–1513.

[457] Irenaeus, *Contra haereses*, 3, 2, 1–2, MPG, 7, 846A–847B. Jules Lebreton, *La réaction catholique* (*Histoire de l'église*, edd. A. Fliche and V. Martin, 2 [Paris, 1935], 20 ff., 54); Eugène de Faye, *Gnostiques et gnosticisme, étude critique des documents du gnosticisme chrétien aux ii^e et iii^e siècles* (2d ed., Paris, 1925), 453 f. and *passim*; Odo Casel, *Die Liturgie als Mysterienfeier* (*Ecclesia Orans*, 9 [3rd to 5th ed., Freiburg im Breisgau, 1923]), 135 ff.; E. F. Scott, *s.v.* Gnosticism, ERE, 6, 231 f.

[458] Nock, *Conversion*, 214, 300.

[459] *Catechesis sexta*, 29, MPG, 33, 589B.

[460] MPG, 32, 187A–189B.

[461] Codex 230: MPG, 103, 1028B.

Balsamon at the end of the twelfth century in his commentary on Basil.[462]

More congenial to Pletho was the pagan tradition in such matters. There is no basis for connecting him with the numerous astrologers, magicians, alchemists, and medical writers who frequently hedged their writings about with injunctions not to betray their methods and formulae to the *profanum vulgus*.[463] But he specifically mentions the Eleusinian Mysteries and Eumolpus, their legendary founder, in his list of authorities,[464] a number of whom stress the need for reticence in matters of both belief and ritual.[465]

Pletho would surely have known of the period of silence imposed by the Pythagoreans upon new initiates, and could harly have been ignorant of the Pythagorean distinction of grades of disciples, only a few of whom were privileged to share in the special knowledge of the inner group.[466] He would have been familiar also with the passages in Plato [467] that have been interpreted by some as signifying there was a secret Platonic doctrine, one of the most important of which occurs in the so-called *Second Epistle*. The pseudonymous author of this *Epistle*, which Pletho took to be genuine,[468] announces, in a sentence separated by three words from the passage cited by Pletho, that he writes guardedly so that unauthorized readers may not understand the philosophical principles under discussion. A few lines farther on he warns that his philosophical views should not be communicated to the uneducated, and concludes by advising the addressee (ostensibly Dionysius, the younger, tyrant of Syracuse), to burn the letter after taking care to memorize it.[469] Plotinus refers to the 'commandment given in the mysteries to disclose nothing to the uninitiated,' [470] Porphyry admonishes Marcella to keep silent about the gods in the presence of the unholy,[471] and Iamblichus repeats

[462] MPG, 138, 840C–841A.

[463] Lynn Thorndike, *A history of magic and experimental science*, 1 (2d ed., N. Y., 1929), 194 f., 287, 578, and *passim*.

[464] Alexandre, 30.11 f.; also in one of his funeral orations, MPG, 160, 951B.

[465] For a collection of passages bearing upon this subject, see Odo Casel, *De philosophorum graecorum silentio mystico*, RGVV, 16.2 (Giessen, 1919); cf. Gustav Mensching, *Das heilige Schweigen*, RGVV, 20.2 (Giessen, 1926).

[466] Iamblichus, *De vita Pythagorica*, 80 (46.3 ff.), 75 (43.9–12), 104 f. (60.15 ff.), 226 f. (121.25–122.3), 247 (132.23–133.2), 258 (139.11 ff.); 32 (19.12), 68 (38.20 ff.), 94 (55.6 ff.), 188 (104.14), 194 (106.25–107.8), 225 (121.14 f.); cf. 2 (5.17 f.), 103 (59.22 f.); Diogenes Laertius, 8, 15; cf. 8, 42; cf. Casel, RGVV, 16.2, 30 ff. Nothing new is added by Jean Mallinger, *Pythagore et les mystères* (Paris, 1944); or by *idem*, *Notes sur les secrets ésotériques des Pythagoriciens* (Paris, 1946), both of which, however, depend closely on the original texts.

[467] *Phaedo*, 61D; *Parmenides*, 128D; etc.; see list of passages in Paul Shorey, *What Plato Said* (Chicago, 1933), 607.

[468] Ed. Johannes Opsopoeus, *Oracula Magica*, 50, reprinted by Alexandre, 280, and in n. 485 *infra*.

[469] *Epistulae*, 2, 312E, 314A–314ABC.

[470] *Enneads*, 6, 9, 11.

[471] *Ad Marcellam*, 15 (284.7–22).

the ancient precepts against divulging the mysteries of the Eleusinian goddesses to the profane.[472] Similar counsel is to be found in the orations of Julian the Apostate.[473] Most important of all, Proclus, Pletho's chief source, who repeatedly warns against revealing the dogmas concerning the gods, and explains the myths of Plato and myths in general as devices for hiding the highest metaphysical truths from the uninitiated and the unworthy, declares that the θεολόγοι (one of his many variants for the authors of the *Oracula Chaldaica*, on Pletho's use of which see Section 1–3 *infra*) put their teaching in cryptic form (ἐν ἀπορρήτοις λέγοντας ἃ λέγουσι).[474]

But even if Pletho could have ignored this aspect of his sources, and even had he never heard of Psellus and Johannes Italus and the suspicion of heresy which clouded their lives because of their great enthusiasm for Platonism,[475] his own experience would have been sufficient to convince him of the need for care and circumspection. He would not have needed Islamic models to teach him discretion, nor would he have been likely to forget that George Scholarius, in replying to his polemic against the Latin dogma of the Procession of the Holy Spirit, had hinted that advocates of a return to paganism should be burned to death. Pletho could hardly have failed to realize that he had deceived no one in his half-hearted repudiation of the pagan principles upon which he had argued that the Latin justification of the addition of *Filioque* to the Creed was ultimately based, and that Scholarius's allusion to the punishment that he would mete out to neopagans was only a thinly veiled threat.[476]

V. ELISAEUS

Täschner's supposition that Pletho had acquired his knowledge of Islam from Elisaeus and that he had concealed the use of Islamic sources under the name of Zoroaster rests upon statements concerning Elisaeus made by George Scholarius in two of his letters. In the earlier of these, addressed to the Princess Theodora (*ca.* 1453), Scholarius declares that:

[472] *De vita Pythagorica*, 75 (43.9–12).

[473] *Orations*, 186D, 217BC, 239A, ed. W. C. Wright, 2, 20, 104, 160.

[474] *In Timaeum*, 3, 248.6; see also the passages cited by Casel, RGVV, 16.2, 144–52, 154 f. Cf. A. E. Chaignet, *Histoire de la psychologie des Grecs*, 5 (Paris, 1893), 165, on Marinus, *Vita Procli*, 15 (25.38–28.4); Wilhelm Kroll, *De Oraculis Chaldaicis*, *Breslauer philologische Abhandlungen*, 7.1 (Breslau, 1894), 16 f.

[475] S. Salaville, 'Philosophie et théologie ou épisodes scholastiques à Byzance de 1059 à 1117,' *Échos d'Orient*, 29 (1930), 132–156; C. Zervos, *Un philosophe néoplatonicien du xi^e siècle, Michel Psellos, sa vie, son oeuvre, ses luttes philosophiques, son influence* (Paris, 1919), 212 ff.; Lysimaque Oeconomos, *Le vie religeuse dans l'Empire byzantin au temps des Comnènes et des Anges* (Paris, 1918), 18–37.

[476] Alexandre, 324.20–25; edd. Petit, etc., 4, 125.25–9. Pletho had advocated the same punishment for 'sophists' temerarious enough to attack his new religion: Alexandre, 126.10–12.

the final impulse which drove Pletho to apostasy came later, in the person of a certain Jew [named Elisaeus], to whom Pletho resorted for instruction because of his skill in the exegesis of Aristotle. Elisaeus, who made a specialty of Averroes and the rest of the Persian and Arabic interpreters of the works of Aristotle which the Jews had translated into their own language, . . . discoursed to Pletho about Zoroaster and the others. Pletho studied long at the feet of this man, who, though ostensibly a Jew, was actually a pagan; he also served as Elisaeus's assistant, and made his living in this way, for Elisaeus was a man of very considerable influence at the court of these barbarians.[477]

The phrase, 'Zoroaster and the others,' is to be understood as 'Zoroaster and the rest of the pagans,' or 'Zoroaster and the Aristotelian commentators.' That this expression must be so construed is proved both by Scholarius's reference to Zoroaster as an archetype of pagan thought in the same category as Plato and the Stoics,[478] and by the fact that the principal object of the two letters which mention Elisaeus is to prove that Pletho was a pagan.

In the second of these, addressed to Joseph the Exarch (*ca.* 1456–7), and entitled *περὶ τοῦ βιβλίου τοῦ Γεμιστοῦ καὶ κατὰ τῆς Ἑλληνικῆς πολυθεΐας*, Scholarius reiterates these charges and couples them, as in the previous letter, with the criticism[479] that Pletho's chief authority was Proclus. Scholarius, who was patriarch in Constantinople from 1453 until 1459 would not have repeated himself in this way, nor would he have specifically named Zoroaster, 'the famous Persian astronomer' (*ἐς ἀστρονομίαν περιβόητον* Πέρ-

[477] Letter to Theodora, wife of Demetrius Palaeologus, Despot of Mistra, edd. Petit, etc., 4, 152.37–153.9: Τὸ δὲ κεφάλαιον αὐτῷ τῆς ἀποστασίας Ἰουδαῖός τις ὕστερον ἐνειργάσατο, ᾧ ἐφοίτησεν ὡς εἰδότι τὰ Ἀριστοτέλους ἐξηγεῖσθαι καλῶς. Ὁ δὲ ἦν Ἀβερόῃ προσεσχηκὼς καὶ τοῖς ἄλλοις ἐκ Περσῶν καὶ Ἀράβων ἐξηγηταῖς τῶν Ἀριστοτελικῶν βίβλων, ἃς Ἰουδαῖοι πρὸς τὴν οἰκείαν γλῶτταν μετήγαγον, . . . Ἐκεῖνος αὐτῷ καὶ τὰ περὶ Ζωροάστρου καὶ τῶν ἄλλων ἐξέθετο. Ἐκείνῳ δὴ τῷ φαινομένῳ μὲν Ἰουδαίῳ, ἑλληνιστῇ δὲ ἀκριβῶς, οὐ μόνον ὡς διδασκάλῳ πολὺν συνὼν χρόνον, ἀλλὰ καὶ ὑπηρετῶν ἐν οἷς ἔδει καὶ ζωαρκούμενος ὑπ' ἐκείνῳ· τῶν γὰρ τὰ μάλιστα δυναμένων ἦν ἐν τῇ τῶν βαρβάρων τούτων αὐλῇ· Ἐλισαῖος ὄνομα ἦν αὐτῷ. The editions are inconsistent in the spelling of Ἐλισαῖος; I use Elisaeus throughout, in English and Greek. To simplify my translation, I have transferred the name of Elisaeus from the last sentence to the first.

This letter seems to have been written at the beginning of 1453, prior to the elevation of Scholarius to the patriarchal throne: *ibid.*, viii, 513 (151.27); M. Jugie, 'La polémique de Georges Scholarius contre Pléthon,' *Byzantion*, 10 (1935), 524 n. 1. On Ἑλληνιστής, see H. J. Cadbury in F. J. Foakes-Jackson and K. Lake, *Beginnings of Christianity*, 5 (London, 1933), 59–74. For the little that is known about Elisaeus, see Mamalakis, *op. cit.* (in n. 2 *supra*), 46.

[478] In reply to Pletho's attack on the Latin theory of the Procession of the Holy Spirit, edd. Petit, etc., 4, 125.21–3.

[479] This follows a few lines after the text quoted in n. 477 *supra*; see also n. 554 *infra*. For the second version of the accusations regarding Elisaeus and Proclus, see Letter to Joseph the Exarch, edd. Petit, etc., 4, 162.8 ff. (also in Alexandre, 423 f.): τοῦτον [*sc.* Ζωροάστρην] ἐγνώρισέ σοι [*sc.* Γεμιστῷ] πρόσθεν ἠγνοημένον, ὁ τῷ δοκεῖν μὲν Ἰουδαῖος, πολύθεος δὲ Ἐλισαῖος· ᾧ μέγα δυναμένῳ τότε παρὰ τῇ τῶν βαρβάρων αὐλῇ παρεσιτοῦ, τὴν πατρίδα φυγών, ἵνα τὰ καλὰ παρ' ἐκείνου μάθῃς διδάγματα. For the continuation of this text, which treats of Pletho's use of Proclus, see n. 554 *infra*; the date is discussed by M. Jugie, *loc. cit.*, and in Petit, etc., 4, viii, 155.

σαις), as Pletho's source,[480] as he does, had there been the slightest evidence that Pletho had used Zoroaster as camouflage for what Täschner calls *Islamisches Geistesgut*. Since Elisaeus is pronounced to have been a pagan and the κεφάλαιον τῆς ἀποστασίας for Pletho, the implication is that what Elisaeus did was to encourage Pletho in his studies of Greek philosophy and, perhaps, to acquaint him with the main results of the Arab interpretation of Aristotle. It should be noted, however, that Elisaeus's competence is stated to have been in the field of the Arabic and Persian commentators on Aristotle, whereas Pletho was an ardent Platonist, and a resolute opponent of Aristotle.

Scholarius's judgment on Pletho resembles that of his contemporary, George of Trebizond, who devotes the whole of the penultimate chapter of his *Comparationes phylosophorum Aristotelis et Platonis* to a critique of Pletho's paganism, which he regards a greater threat to Christianity than Islam. He calls Pletho *alter . . . Machumetus*, but only in the sense of 'enemy of the Christian faith,' and nowhere gives the slightest hint that he had found any trace of Muslim influence in Pletho's writings.[481]

VI. PLETHO AND ZOROASTER [482]

When Pletho cited Zoroaster as one of his principal sources, he was not attempting to use the name of Zoroaster as a blind to mask surreptitious borrowing from Islam. A critical study of Pletho's commentary on the *'Magical' oracles of the Magi of Zoroaster* [483] (i.e., on the so-called *Oracula Chaldaica*, which were compiled sometime near the end of the second century of our era by a certain Julianus) [484] would have demonstrated that

[480] Edd. Petit, etc., 4, 162.5.

[481] See nn. 133 and 438 *supra*.

[482] As an introduction to my analysis of Pletho's sources for his theory of the triadic division of the universe, I have made free use (in section VI, 1 and 2 *infra*) of the texts bearing upon the Greek tradition concerning Zoroaster collected and discussed by Joseph Bidez and Franz Cumont in their monograph, *Les mages hellénisés*, cited *infra* as *Mages*. I have not used any of these texts, however, without verifying them from the editions in which they were originally published. See also A. J. Festugière, *La révélation d'Hermès Trismégiste*, 1 (Paris, 1944), 17 f., 19 ff.

[483] Μαγικὰ λόγια τῶν ἀπὸ Ζωροάστρου Μάγων ἐξηγηθέντα παρὰ Πλήθωνος (*Vaticanus Graecus 1011*, f. 12 *verso* [15th century]; *Parisinus Graecus 2832*, f. 23 *verso* [15th century]); see *Mages*, 2, 252. The text of Pletho's edition of the *Oracula Chaldaica* and of his commentary is available in Johannes Opsopoeus, *op. cit.*; excerpts of the commentary have been edited under the title, ἐκ τῆς διασαφήσεως τῶν ἐν τοῖς Ζωροάστρου λογίοις ἀσαφέστερον εἰρημένων, by Alexandre, 274–81. The best complete edition of the Greek text of the *Oracula Chaldaica* is that of L. H. Gray in A. V. Williams Jackson, *Zoroaster, the prophet of ancient Iran* (N. Y., 1899), 261–73; cf. Kroll, *op. cit.* (n. 474 *supra*). See also the brief fragment of Pletho's commentary published by Bohdan Kieszkowski, *Platonizm renesansowy* (Warsaw, 1935), appendix III.

[484] Kroll, *op. cit.*, 71 f.; *idem*, PW, 10 (1919), 15–17; Joseph Bidez, *Catalogue des manu-*

Pletho's high estimate of Zoroaster as a great sage and precursor of Plato was not an invention on his part but only another example of his conformance to the medieval tradition of Greek philosophy. This is not the place to examine the whole question of Pletho's use of the ideas which he associated with the name of Zoroaster or to analyze his annotations on the *Oracula Chaldaica* in detail. Such an investigation would involve an appraisal of Pletho's philosophical system in general and of his relationship to the works of the pagan philosophers of the Christian era, in which the *Oracula Chaldaica* are cited and brought into comparison with Plato.

But in order to deal with Täschner's theory, it will be necessary to review some of Pletho's statements about Zoroaster and to seek out the authorities on which they rest. At the end of his commentary on the *Oracula Chaldaica*, Pletho says:[485]

It is evident that many others, notably the Pythagoreans and the Platonists, have set forth views somewhat similar to the above-mentioned, which have come down from Zoroaster. The philosophy of Plato appears to be in complete harmony also [486] with the Zoroastrian doctrine as expounded by Plutarch. Plutarch says that Zoroaster divided the universe into three categories, setting Ahura-Mazda over the first (and this is the Father mentioned in the *Oracula* [*Chaldaica*]), Ahriman over the third, and Mithra, who is the second mind mentioned in the *Oracula*, over the middle category . . .[487]

This agrees perfectly with those famous words of Plato: 'All things are related to the king of the universe, and all things exist on account of him, and he is the cause of

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scrits alchimiques grecs, 6 (Brussels, 1928), 85. See above all the valuable paper of E. R. Dodds, 'Theurgy and its relation to Neoplatonism,' JRS, 37 (1947), 55–7; Willy Theiler, *Die chaldäischen Orakel u. die Hymnen des Synesius* (*Schriften d. Königsberger Gelehrten Gesellschaft*, 18, Geisteswiss. Kl., Heft 1 [Halle, 1942]), 1–3.

[485] I have used the text printed in *Mages*, 2, 253, taken from the redaction of Mme. C. Zerck-Nové, whose edition will replace the older texts of Alexandre, 279–81, and Opsopoeus, *op. cit.*, 50: Δῆλοι οὖν εἰσιν ἄλλοι τε συχνοὶ ἀνθρώπων τοῖς ἀπὸ Ζωροάστρου τούτοις συνῳδούς πη καταστησάμενοι τὰς δόξας, μάλιστά γε μὴν καὶ οἱ περί τε Πυθαγόραν καὶ Πλάτωνα σοφοί· ἐπεὶ καὶ ἐκείνοις ἔτι τῶν Ζωροάστρου, οἷς φησι περὶ αὐτοῦ ὁ Πλούταρχος πάνυ συνῳδὰ καὶ τὰ Πλάτωνος φαίνεται. Φησὶ δὲ περὶ Ζωροάστρου Πλούταρχος ὡς τριχῇ τὰ ὄντα διέλοι, καὶ τῇ μὲν πρώτῃ αὐτῶν μοίρᾳ Ὡρομάζην ἐφιστῴη — τοῦτον δ' εἶναι τὸν ὑπὸ τῶν Λογίων Πατέρα καλούμενον — τῇ δ' ἐσχάτῃ Ἀριμάνην, Μίθρην δὲ τῇ μέσῃ· καὶ τοῦτον δ' αὖ εἶναι τὸν Δεύτερον Νοῦν καλούμενον ὑπὸ τῶν Λογίων . . . [cf. n. 538 infra]. Οἷσπερ πάντως συνῳδὰ καὶ τὰ Πλάτωνος ἐκεῖνά ἐστι· "Περὶ τὸν πάντων βασιλέα πάντ' ἐστι καὶ ἐκείνου ἕνεκα πάντα, καὶ ἐκεῖνο αἴτιον ἁπάντων τῶν καλῶν, δεύτερον δὲ πέρι τὰ δεύτερα, καὶ τρίτον πέρι τὰ τρίτα." Μοίρας δὲ τρεῖς, ἐς ἃς Ζωροάστρης τε καὶ Πλάτων τὰ ὄντα διῃρήκεσαν, εἶναι πρώτην μὲν τὴν αἰώνιον, δευτέραν δὲ τὴν ἔγχρονον μὲν ἀΐδιον δέ, τρίτην δὲ τὴν θνητήν. Ζωροάστρην δέ φησι Πλούταρχος οὕτω παλαιόν τινα γεγονέναι, ὡς καὶ πεντακισχιλίοις ἔτεσι τῶν Τρωϊκῶν πρεσβύτερον ἱστορεῖσθαι. On the date assigned to Zoroaster, see n. 539 *infra*.

[486] The 'also' (ἔτι for ἐπεί or ἔπειτα of some of the mss.) indicates, as Bidez and Cumont point out (*Mages*, 2, 253 f.), that Pletho regards Plutarch as supporting the *Oracula Chaldaica*.

[487] The 'Father' in question is mentioned in Pletho's edition of the *Oracula Chaldaica*: πάντα γὰρ ἐξετέλησε πατήρ, καὶ νῷ παρέδωκε (Opsopoeus, *op. cit.*, 22.9). Cf. Pletho's note, *ibid.*, 46.12 ff., and Psellus's, *ibid.*, 90 *ad fin.* (= MPG, 122, 1140CD); Proclus, *In Parmenidem*, 1096.29 ff.; *idem*, *Elements of theology*, prop. 151, and Dodds *ad loc.* (see n. 519 *infra*).

all that is good. The beings of the second class are related to the second principle [or, king]; and those of the third to the third.'

The three categories into which Zoroaster and Plato divided the universe are: first that which is eternal, second that which is in time but perpetual, and third that which is mortal. Plutarch says that Zoroaster is of great antiquity and is represented as antedating the Trojan War by 5,000 years.

To appreciate fully the meaning of these words, we shall have to consider separately: (1) Pletho's view of the relation of Pythagoras and Plato to Zoroaster, (2) his citations from Plutarch, and (3) the triadic division of the universe which he attributes to both Zoroaster and Plato.

1. PLETHO ON ZOROASTER, PYTHAGORAS, AND PLATO

Pletho's reference to Pythagoras and Plato in connection with Zoroaster is made more explicit by his remark (in replying to George Scholarius's criticism of Plato)[488] that

> . . . the philosophy of Plato was not original with him but was derived from Zoroaster *via* the Pythagoreans. For according to a tradition chiefly represented by Plutarch, Pythagoras studied Zoroastrianism during his sojourn in Asia among the Magi, the successors of Zoroaster, and Zoroaster lived 5000 years before the Trojan War. The latter of these two statements may perhaps be doubted, but in any case Zoroaster would be the most ancient of all the philosophers and law-givers whose names are recorded, except for Men, the Egyptian law-giver . . .[489] That Plato was a student of Zoroastrianism is demonstrated by the extant Zoroastrian oracles, which agree in every detail with the Platonic system.

Behind these words lay the notion, widely cherished among ancient and medieval thinkers, that the sages of the East were the spiritual precursors and teachers of the Greeks, and that Greek philosophy and learning were little more than derivatives of Oriental wisdom. Some believed that the Egyptians were the inventors of philosophy; others, like the members of the Platonic Academy, whom Pletho followed, gave the palm to Zoroaster and

[488] Πρὸς τὰς ὑπὲρ Ἀριστοτέλους Γεωργίου τοῦ Σχολαρίου ἀντιλήψεις: MPG, 160, 984A (reprinted from W. Gass, *op. cit.* [in n. 11 *supra*], pt. 2, 59.30 ff.); Alexandre, 297.3 ff.; *Mages*, 2, 259 f.: . . . ἐφιλοσόφησέ [*sc.* ὁ Πλάτων] τε οὐκ ἰδίαν ἑαυτοῦ σοφίαν τεκών [emendation of *Mages*, 2, 259, for τέμνων], ἀλλὰ τὴν ἀπὸ Ζωροάστρου διὰ τῶν Πυθαγορείων ἐς αὐτὸν κατεληλυθυῖαν. Πυθαγόραν γὰρ τοῖς ἀπὸ Ζωροάστρου συγγεγονότα ἐν τῇ Ἀσίᾳ Μάγοις, ταύτην τὴν φιλοσοφίαν μετελθεῖν, ὃν δὴ Ζωροάστρην ἱστοροῦσιν ἄλλοι τε καὶ Πλούταρχος πεντακισχιλίοις τῶν Τρωϊκῶν γεγονέναι ἔτεσι πρεσβύτερον. εἰ τῳ δὲ τοῦτο οὐ πιστόν, ἀλλ' οὖν παλαιότατος ἂν εἴη τῶν ὅλως ὀνομαζομένων σοφῶν τε καὶ νομοθετῶν πλὴν Μηνὸς τοῦ Αἰγυπτίου νομοθέτου . . . . ὡς δὲ ταύτην Πλάτων μετῆλθε τὴν σοφίαν, τὰ ἀπὸ Ζωροάστρου ἔτι καὶ εἰς ἡμᾶς σωζόμενα λόγια δηλοῖ, συνῳδὰ ὄντα ταῖς Πλάτωνος πάντη καὶ πάντως δόξαις.

[489] In the words following νομοθέτου, omitted here, Pletho dismisses Men as unworthy of respect. Similarly in *Nomoi*, 3, 43 (the *Epinomis*), Men is excluded from consideration, although Pletho supposed him to have antedated Zoroaster by 3000 years, because he was deemed neither wise nor significant: Alexandre, 252.19 ff.

the Magi.[490] So great did the prestige of Zoroaster become that many sought to conceal their own ideas under the mantle of his name, and in the third century of the Christian era, a sect of Christians who belittled Plato and claimed for their system the authority of Zoroaster were exposed by Porphyry in his biography of Plotinus as charlatans.[491] Pythagoras and Plato, however, were associated with Zoroaster by the most reputable witnesses.

A. PYTHAGORAS AND ZOROASTER

The journeys of Pythagoras to the East and the instruction in Zoroastrianism he is said to have obtained are often discussed by Greek writers. Plutarch speaks of Zoroaster as the teacher of Pythagoras;[492] and Porphyry in his *Vita Pythagorae* relates that Pythagoras went to Babylon, where he visited Zoroaster, who cleansed him of his sins and instructed him in philosophy.[493] Much the same is the testimony of Hippolytus, Clement of Alexandria, Cyril of Alexandria, Suidas, and a scholiast on Plato's *Republic*. The earliest sources for this tradition seem to be (1) Aristoxenus, the philosopher and musicologist of the fourth century B.C. excerpted by Pletho, (2) a certain Diodorus of Eretria, of whom nothing is known except that he is thought to have used Aristoxenus, and (3) Alexander Polyhistor (first century B.C.), the testimony of the first two named being preserved by Hippolytus, and that of the third by Clement and Cyril of Alexandria.[494] Philostratus (in his life of Apollonius of Tyana), Iamblichus, and the Emperor Julian the Apostate omit mention of Zoroaster in this connection, but all three relate that Pythagoras went to the east and learned a great deal – from the Magi (according to Philostratus and Iamblichus), or (as Julian says) from the Persians.[495]

[490] Festugière, *op. cit.* (n. 482 *supra*), 20–44.

[491] *Ibid.*, 43 f.; *Plotini vita*, ed. F. Creuzer (see n. 6 *supra*), 1, lxvi.

[492] *De animae procreatione*, 2 (1012E): καὶ Ζαράτας ὁ Πυθαγόρου διδάσκαλος [Zaratas being a variant for Zoroaster]; Michael Apostolius, *Centuria* VIII, 27a, *Paroemiographi graeci*, 2, 433. Festugière, *op. cit.* (n. 482 *supra*), 24 f.; *Mages*, 1, 33 ff., 37 ff., 250; 2, 35 ff., 65f.

[493] 12 (23.7 ff.): ἔν τε Ἀραβίᾳ τῷ βασιλεῖ συνῆν [*sc.* Pythagoras] ἔν τε Βαβυλῶνι τοῖς τ' ἄλλοις Χαλδαίοις συνεγένετο καὶ πρὸς Ζάρατον ἀφίκετο, παρ' οὗ καὶ ἐκαθάρθη τὰ . . . λύματα καὶ ἐδιδάχθη . . . Cf. *ibid.*, 6 and 41 (19.24 ff., 38.16 ff.). *Mages*, 2, 37 f.; Isidore Lévy, *Recherches sur les sources de la légende de Pythagore* (Paris, 1926), 93 f.

[494] Hippolytus, *Refutatio omnium haeresium*, 1, 2, 12; 6, 23, 2 (καὶ Ζαράτας ὁ Πυθαγόρου διδάσκαλος), ed. Paul Wendland (Leipzig, 1916), 7.2 ff., 149.29 f. Clement of Alexandria, *Stromata*, 1, 15, 69, 6–70, 1, ed. Stählin, 2, 44.5–8; Cyril, MPG, 76, 633CD, 705B; Suidas, *Lexicon*, *s.v.* Pythagoras; scholiast on Plato, *Republic*, 10, 600B (272). *Mages*, 2, 35–40; Gualter Rathmann, *Quaestiones Pythagoreae, Orphicae, Empedocleae* (Halis Saxonum, 1933), 12; Lévy, *Recherches*, 44, 82.

[495] Philostratus, *Vita Apollonii*, 1, 2, 1; Iamblichus, *De vita Pythagorica*, 4, 19; cf. 29, 158 f. (13.12 ff., 89.17 f.); Julian, *Oratio* 7, 236D (2, 154, ed. W. C. Wright). *Mages*, 2, 37; Lévy, *Recherches*, 102 ff., 132; cf. Georges Méautis, *Recherches sur le Pythagorisme* (Université de

B. PLATO AND PYTHAGORAS

Plato's indebtedness to Pythagoras, recognized and discussed as early as Aristotle, who says that Plato's philosophy was in many respects based upon that of the Pythagoreans, has never been seriously questioned.[496] Diogenes Laertius tells the fable of a visit Plato made to Italy and of his acquisition from Philolaus while there of a Pythagorean treatise which provided the contents of the *Timaeus*. According to the same authority, and an anonymous writer of an introduction to the philosophy of Plato, both of whom seem to be dependent here upon Aristotle, the Platonic system is a combination of Heraclitean, Pythagorean, and Socratic elements.[497] Plato's dependence upon the Pythagoreans is mentioned also by Porphyry and Iamblichus in their biographies of Pythagoras,[498] and as by Proclus (who follows here as elsewhere the example of his master, Syrianus, an author known to Pletho) in his *Theologia Platonis* and in his commentaries on the Platonic dialogues.[499]

C. PLATO AND ZOROASTER

Even many modern authorities are convinced that there was contact between Zoroastrianism and Plato, and that Plato introduced Zoroastrian dualism into the *Laws* in the form of the conflict between the good world-soul and the evil world-soul.[500] The tradition according to which the celebrated Er of the tenth book of Plato's *Republic* was taken to be Zoroaster (or the teacher of Zoroaster)[501] reflects the conviction that the myth of Er

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Neuchâtel, *Recueil de travaux publiés par la Faculté des Lettres*, fasc. 9 [Neuchâtel, 1922]), 88–92.

[496] *Metaphysics*, A, 6, 987a.29 f., ed. W. D. Ross, 1 (Oxford, 1924), xlv ff., 158 f.; Festugière, *op. cit.* (n. 482 *supra*), 17–19; Erich Frank, *Plato u. die sogennanten Pythagoreer* (Halle, 1923), 124, 378, and *passim* (index *s.v.* Plato u. Philolaus, Plato u. Pythagoreer, etc.). Cf. also the scholia on the Platonic dialogues, *Phaedrus*, 279C; *Lysis*, 207C; *Republic*, 424A; and *Timaeus*, 20A (88, 120, 222, 279); Rathmann, *op. cit.*, 22 f., 24 f., 139 f., and *passim*.

[497] 3, 6, 8 f. (Plato); 8, 84 f. (Philolaus); cf. 8, 79 (Archytas); *Prolegomena philosophiae Platonicae*, 4, ed. C. F. Hermann, *Platonis dialogi*, 6 (Leipzig, 1902), 199.21–8. Cf. Iamblichus, *De vita Pythagorica*, 31, 199 (109.8 ff.); Photius, *Bibliotheca*, codex 249, MPG, 103, 1581B; W. D. Ross, *loc. cit.*, xlv ff.

[498] Porphyry, *Vita Pythagorae*, 53 (46.12 ff.); Iamblichus, *De vita Pythagorica*, 27, 130 f.; 30, 167; cf. 31, 199 (74.4–25, 94.21 f., 109.8 ff.).

[499] See Suidas, quoted in n. 524 *infra*. Proclus, *In Timaeum*, 1, 1.11 ff., 25; 1, 2.29 ff.; 1, 7.19–25; cf. 1, 237.5; *In I Alcibiadem*, 317.11 ff., 18 ff.; *Theologia Platonis*, 1, 5 (13.7 ff. and *passim*).

[500] *Laws*, 10, 896E; cf. Plutarch, *De Iside et Osiride*, 48 (370F); J. Bidez, *Eos, ou Platon et l'Orient* (Brussels, 1945), *passim*; Werner Jaeger, *Aristotle, fundamentals of the history of his development* (Oxford, 1934), 132 f.

[501] Clement of Alexandria, *Stromata*, 5, 14, 103, 2, ed. Stählin, 2, 395=Eusebius, *Praeparatio evangelica*, 13, 13, MPG, 21, 1116CD; Proclus, *In Rem Publicam*, 2, 109.8 ff., 110.2 ff. *Mages*, 2, 158 f., 161 n. 5; Bidez, *Eos*. A. J. Festugière, 'Platon et l'Orient,' *Revue de philo-*

is of Iranian origin; and Plato's use of material of this kind has been regarded as proof of the popularity and influence of Zoroastrianism in his day. Further signs of familiarity with Iranian thought can be seen in the section devoted to Persia and to Zoroaster in the *First Alcibiades* (probably not by Plato himself but by a member of his circle),[502] in the reflection of Persian astral theology in another pseudonymous work (the *Epinomis*, which according to Diogenes Laertius was attributed by some to Philip of Opus, Plato's secretary),[503] and in the interest which three other disciples of Plato (Hermodorus, Eudoxus, and Heraclides Ponticus) were known to have had in Zoroastrian learning.[504] The Magi are named by Aristotle in the *Metaphysics* among the earliest forerunners of Plato's dualism;[505] and the same subject seems to have been discussed in the lost dialogue, *On philosophy*, in the course of which Aristotle apparently referred by name to Zoroaster as having lived 6,000 years before the death of Plato.[506]

Precisely how Persian philosophy and astronomy reached Plato and his group is not known. Professor Jaeger points to the presence of a Chaldaean in Athens as a regular member of the Academy in Plato's lifetime as a possible catalyst.[507] In late antiquity, however, Plato's knowledge of Zoroastrian principles was explained by a supposed visit of Plato to Phoenicia and a number of meetings there with some Persians, who instructed him in the system of Zoroaster. This tale, which is told by an anonymous author of an introduction to the philosophy of Plato,[508] is recounted also in the *Vita Platonis* of one of Pletho's sources, Olympiodorus, who says that Plato learned μαγική from the Magi.[509]

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logie, 73 (3e sér., 21, 1947), 1–45, examines the theories of Jaeger, Reitzenstein, Geffcken, and Bidez, and concludes that Chaldaean astral theology had considerable influence upon the religion of Plato, but that, though traces of Iranian dualism are discernible in the *Politicus*, Plato's conception and treatment of the problem of evil are wholly original.

[502] 121E–122A; Bidez, *Eos*, 101 ff.; *Mages*, 2, 21 f.; Jaeger, *loc. cit.*; Paul Shorey, *What Plato said* (Chicago, 1933), 415, 652–4.

[503] *Epinomis*, 986E, 987B, 987D–988A; Diogenes Laertius, 3, 37 and 46; Bidez, *Eos*, 93 ff., 97 ff.; Jaeger, *loc. cit.*; Shorey, *op. cit.*, 408, 649.

[504] Pliny, *Naturalis historia*, 30, 1, 3, ed. C. Mayhoff, 4 (Leipzig, 1897), 420.18 ff.; Plutarch, *Adversus Coloten*, 14 (1115A); Diogenes Laertius, 1, 2 and 8; Bidez, *Eos*, *passim*; *Mages*, 1, 12 ff., 81 ff., 113; 2, 9, 25, 66, 68.

[505] *Metaphysics*, N4, 1091b.8–10; Jaeger, *op. cit.*, 133.

[506] Aristotle, fr. 6, ed. R. Walzer (Florence, 1934), 68 f.; Diogenes Laertius, 1, 8. *Mages*, 1, 15 ff.; 2, 9–11; Jaeger, *op. cit.*, 133–6.

[507] *Op. cit.*, 132 n. 1 (*Academicorum philosophorum Index Herculanensis*, ed. S. Mekler [Berlin, 1902], col. 3, p. 13). The anonymous author of the *Prolegomena philosophiae Platonicae*, 6, ed. Hermann, *Platonis dialogi*, 6, 202.10 f., says that Magi went to Athens in order to study the philosophy of Plato.

[508] *Prolegomena philosophiae Platonicae*, 4, *loc. cit.*, 199.31–3. *Mages*, 2, 40 f.; Bidez, *Eos*, 21 ff.

[509] 5, ed. Hermann, *Platonis dialogi*, 6, 194.17 ff.; cf. Pausanias, 4, 32, 4. Other sources

Μαγική and μαγεία, it should be noted, do not in this context mean 'magic' in the modern sense. The μάγοι who are represented as having initiated Pythagoras and Plato in the lore of Zoroaster were not 'magicians,' but specialists skilled in the worship of the gods. This definition (μαγείαν . . . ἔστι δὲ τοῦτο θεῶν θεραπεία) occurs in the *First Alcibiades*;[510] and Porphyry in the *De abstinentia* says, 'Among the Persians, those who understand the divine and serve it are called Magi, for that is what "Magus" means in their language.' [511] This interpretation of μαγεία is consistent with the belief, often expressed, that the first sacrifices to the gods had been made by the Chaldaeans (who disputed this distinction with the Cyprians),[512] and with the not unrelated notion that Zoroaster was the discoverer of philosophy [513] and of astronomy.[514]

Under these circumstances, Pletho's appeal to Zoroaster as an authority in θεολογία on a par with Plato [515] should occasion no surprise. He was merely following once again in the footsteps of Neoplatonists like Proclus, who often refers to the authors of the *Oracula Chaldaica* as θεολόγοι,[516] and

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have it that Plato wished to make the acquaintance of the Magi but was prevented from doing so by the wars in Asia: Diogenes Laertius, 3, 7. *Mages*, 2, 41.

[510] 122A. Mages, 1, 144 ff., 162; 2, 18 ff., 28 f., 119. Dio Chrysostom (*Oratio* 36, 40 f.) says that the *magi* were specially favored with regard to truth and the understanding of god, and were skilled in serving the divine (θεραπεύειν τὸ δαιμόνιον); cf. ps.-John Chrysostom, *Opus imperfectum in Matthaeum*, Hom. 2, 2, MPG, 56, 637A; Damascius, *De primis principiis*, ed. Ruelle (n. 522 *infra*), 2, 201.1 ff. But Cosmas of Jerusalem (*Ad Carmina S. Gregorii*, 64, MPG, 38, 491.12 ff.), Suidas (*s.vv.* Γοητεία and Μαγεία), and others associate Μαγεία with the invocation of good *diamones* for the accomplishment of a beneficent purpose (cf. Nicephorus Gregoras, *Scholia in Synesium de insomniis*, MPG, 149, 542B f.).

[511] 4, 16: παρά γε μὴν τοῖς Πέρσαις οἱ περὶ τὸ θεῖον σοφοὶ καὶ τούτου θεράποντες μάγοι μὲν προσαγορεύονται. τοῦτο γὰρ δηλοῖ κατὰ τὴν ἐγχώριον διάλεκτον ὁ μάγος. Hesychius, *s.v.* μαγεύειν: γοητεύειν· θεραπεύειν θεούς. *Mages*, 1, 11, 94 n. 1, 144 f.; 2, 67 f.

[512] Cosmas of Jerusalem, *loc. cit.*, 491.4 ff.; Nonnus Abbas, *Ad S. Gregorii Orationem I contra Julianum*, MPG, 36, 1021B; George Monachus, *Chronicon*, 1, ed. C. de Boor (Leipzig, 1904), 74.4 ff.; Cedrenus, *Historiarum compendium*, 41A, ed. I. Bekker, 1 (Bonn, 1838), 73.4 ff. *Mages*, 1, 144 ff., 162; 2, 14 n. 25, 18 ff.

[513] Suidas, *s.v.* Ἀντισθένης: . . . ἀφηγεῖται δὲ περὶ Ζωροάστρου τινὸς Μάγου, εὑρόντος τὴν σοφίαν. Cf. *idem*, *s.v.* Μάγοι; Diogenes Laertius, 1, 1 f. *Mages*, 2, 7, 17; n. 490 *supra*.

[514] Suidas, *s.v.* ἀστρονομία: . . . πρῶτοι Βαβυλώνιοι ταύτην ἐφεῦρον διὰ Ζωροάστρου. Cosmas of Jerusalem, *loc. cit.*, 491.7 f.; Nonnus Abbas, *loc. cit.*; George Monachus, *loc. cit.*; Michael Glycas, *Annales*, II, MPG, 158, 253C (=244.5 f., ed. Bonn); Cedrenus, *loc. cit.*, 73.7 f.; Theodorus Meliteniotes, εἰς τὴν Σωφροσύνην, ed. Miller, *Notices et extraits des manuscrits de la Bibliothèque Impériale*, 19 (1858), 70, v. 1330. *Mages*, 2, 18 ff.

[515] Alexandre, 2.1 f.: ἡ βίβλος ἥδε [*sc.* the *Nomoi*] περιέχει θεολογίαν μὲν τὴν κατὰ Ζωροάστρην τε καὶ Πλάτωνα. Cf. *ibid.*, 30.7 f., 252.4 ff., 254.1 ff., 13, 16, 256.14.

[516] The *Oracula Chaldaica* are usually referred to by such expressions as θεολόγοι, θεοί, etc.: θεολόγοι: *In Timaeum*, 1, 34.21, 142.22, 154.13 f.; 2, 9.16, 82.3, 20, 129.27, 260.28; 3, 55.31, 127.15, 247.28, 271.2; θεοπαράδοτος θεολογία: 1, 318.22, 408.12 f.; ὑπερόριος θεοσοφία: 2, 57.10; θεοί: 2, 10.8; 3, 12.27, 124.25, 257.5, 326.1, etc.; see list in *index auctorum*, 3, 366 f.; *In Rem Publicam*, 2, 419. Cf. Kroll, *op. cit.* (n. 474 *supra*), 8 f.

frequently calls attention to what he takes to be the identity between their teaching and that of Plato.[517] The fancied similarity between the two is so striking a feature of the Neoplatonic tradition that theurgists known to Psellus invented the fable that Julianus, the editor and compiler of the *Oracula Chaldaica*, had an archangelic soul, which enabled him to evoke the ghost of Plato by hieratic art and to obtain from it whatever information he desired.[518] The prestige of the *Oracula* was further enhanced by the remark attributed to Proclus (who, it should not be forgotten, was Plato's successor in the Academy in the fifth century of the Christian era) that, if he could have his way, he would suppress all books except the *Timaeus* of Plato and the *Oracula Chaldaica*, on both of which he had written extensive commentaries.[519]

No doubt it was statements of this kind that led Psellus (like Procopius of Gaza before him) to suspect Iamblichus and Proclus, who were, with Porphyry and Syrianus,[520] the most enthusiastic devotees of the *Oracula Chaldaica*, of having preferred the Chaldaean theurgy to the philosophy of the Greeks.[521] This is manifestly an exaggeration in view of the dominant position of Plato in Neoplatonic thought, to say nothing of the numerous quotations from, and respectful allusions to, Plato which cover the pages of all the Neoplatonists.[522] Still, citations of the *Oracula Chaldaica* are a prominent feature in Neoplatonic writings, and Proclus regarded the *Oracula* as direct revelations from the gods in no way inferior in authority to the divine Plato himself.[523] So convinced was he of this that he either wrote, or edited, a treatise on the agreement of the *Oracula Chaldaica* with Orpheus, Pythagoras, and Plato.[524] A certain Hierocles mentioned by Photius devoted the

[517] *In Timaeum*, 1, 317.11–13, 318.15–23, 408.19–26; *In I Alcibiadem*, 317.36–320.2, 417.11–14; *De decem dubitationibus circa providentiam*, 76.8–11; *De providentia et fato et eo quod in nobis*, 155.22–29, 164.3–8; *In Parmenidem*, 769.9 ff., 801.16–26; *In Rem Publicam*, 1, 27.27 ff., etc., *ad infinitum*.

[518] *περὶ τῆς χρυσῆς ἀλύσεως τῆς παρ' Ὁμήρῳ*, ed. C. N. Sathas, 'Sur les commentaires byzantins,' *Annuaire de l'Association pour l'encouragement des études grecques*, 9 (1875), 216 f.; cf. Bidez, *Catalogue*, 143 f.

[519] Marinus, *Vita Procli*, 38 (65.16 ff.); cf. E. R. Dodds, *Proclus, the elements of theology* (Oxford, 1933), xii f. I am much indebted to Professor Dodds's valuable text, translation, and notes.

[520] Marinus, *Vita Procli*, 26 (44.31–48.22).

[521] Bidez, *Catalogue*, 85 f., 163.19 ff.; Dodds, *Proclus*, xxiii; C. N. Sathas, 'Sur un ouvrage de Porphyre,' BCH, 1 (1877), 319; cf. W. Kroll, *s.v.* Iulianos, PW, 10 (1919), 16 f.

[522] Plotinus: *Enneads*, 5, 1, 8; 6, 2, 1; Porphyry: see Cyril, *Contra Julianum*, 1, MPG, 76, 549A–553C and *passim*; Iamblichus, *De communi mathematica scientia*, 7, ed. N. Festa (Leipzig, 1891), 31.9 f.: *ὁ θειότατος Πλάτων*; Proclus: *Theologia Platonis*, 1.1 ff., 215.28 ff., and *passim*; Damascius, *Dubitationes et solutiones*, ed. C. E. Ruelle, 1 (Paris, 1889), 285.9 f.: *αὐτὸς δὲ ὁ πολυτίμητος ἡμῖν φιλόσοφος ὁ Πλάτων*.

[523] See texts cited in n. 516 f. *supra*; cf. Marinus, *Vita Procli*, 26 (45.24): *θεοπαράδοτα Λόγια*.

[524] Suidas, *s.vv.* Πρόκλος and Συριανός: *Συμφωνίαν Ὀρφέως, Πυθαγόρου, Πλάτωνος περὶ τὰ*

fourth book of his treatise *De providentia et fato* to a demonstration of the similarity between Plato on the one hand and the [Chaldaean] oracles and the priestly ordinances on the other.[525]

Pletho thus had ample precedent for believing that the doctrine of the *Oracula Chaldaica* and that of Plato were identical. The further question, whether he had any warrant for equating Zoroaster (and the Magi) with the Chaldaeans, can also be resolved satisfactorily in his favor. In the first place, 'Oracles of Zoroaster' (*τά τε Ζωροάστρου λόγια*) were not unknown and were presumably mentioned by Xanthus (a minor historian of the fifth century B.C.) and indubitably by Nicholas of Damascus (in the first century of the Christian era).[526] Moreover, apart from a sixteenth century manuscript of Psellus in which the *Oracula Chaldaica* are entitled *τὰ λόγια τοῦ Ζωροάστρου*,[527] there are a number of Greek authors who describe Zoroaster as a Chaldaean. Chief among these are Hippolytus (who relies upon the authority of Aristoxenus and Diodorus of Eretria), Porphyry, the pseudo-Eudocia, Suidas, and Theodore Meliteniotes,[528] whose witness to this tradition is supported by Cosmas of Jerusalem, Nonnus Abbas, George Monachus, Cedrenus, and Michael Glycas, all of whom place Zoroaster among the Babylonians.[529] In addition, the texts often refer to Zoroaster's disciples as 'magi,'[530] and associate them with Babylonia,[531] which is, of course, a com-

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Λόγια βιβλία ι' (4, 210.12 f., 479.1 f.). Cf. Bidez, 'Proclus, *περὶ τῆς ἱερατικῆς τέχνης*,' *Mélanges Franz Cumont* (*Annuaire de l'Institut de philologie et d'histoire orientales et slaves*, 4.1 [Brussels, 1936]), 89; Dodds, *Proclus*, xiv; *idem*, JRS, 37 (1947), 55 f.

[525] *Bibliotheca*, codex 214, MPG, 103, 705C.

[526] *Die Fragmente d. griechischen Historiker*, ed. Felix Jacoby (Berlin, 1926), 2A, 372.32; 2C, 252; *Mages*, 2, 82 with n. 1.

[527] *Vaticanus Graecus 1416*: *Mages* 1, 160; 2, 251. In this ms. the treatise has the subtitle, *Χαλδαϊκὸν λόγιον*.

[528] Hippolytus, *Refutatio omnium haeresium*, 1, 2, 12, ed. Paul Wendland, 1 (Leipzig, 1916), 7.2 ff.: *Διόδωρος δὲ ὁ Ἐρετριεὺς καὶ Ἀριστόξενος ὁ μουσικός φασι πρὸς Ζαράταν τὸν Χαλδαῖον ἐληλυθέναι Πυθαγόραν*. Porphyry, *Vita Pythagorae*, 12 (23.7 ff.), cf. 6 and 41 (19.24 ff., 38.16 ff.); pseudo-Eudocia, *Violarium*, 993, ed. J. Flach (Leipzig, 1880), 727.1: *οἱ Χαλδαῖοι, ὧν πρῶτος ὁ Ζωροάστρης*; Suidas, *Lexicon*, *s.v.* *Ζωρομάσδρης* (a variant for *Ζωροάστρης*: *Mages*, 2, 140); Theodore Meliteniotes, *Ex libro de astronomia*, 1, 11, MPG, 149, 997CD; CCAG, ed. J. Heeg, 5.3 (Brussels, 1910), 140.23–33. Cf. Suidas, *s.v.* *ἀστρονομία*; J. Lydus, *De mensibus*, 2, 4 (21.1 ff.).

[529] See texts referred to in nn. 512 and 514 *supra*.

[530] Plutarch, *Quaestiones convivales*, 4, 5, 2, (670D); *idem*, *De defectu oraculorum*, 10 (415A) quoted by Eusebius, *Praeparatio evangelica*, 5, 4, MPG, 21, 319A; Dio Chrysostom, *Oratio* 36, 40 f.; Lucian, *Menippus sive Necyomantia*, 6 (463): *τῶν Μάγων τῶν Ζωροάστρου μαθητῶν καὶ διαδόχων*. Cf. *Mages*, 1, 161; 2, 37 n. 1, 72 ff. Cf. J. Przyluski, 'Les Mages et les Mèdes,' *Revue de l'histoire des religions*, 122 (1940), 85–101, espec. 86–88; P. de Menasce, 'Autour d'un texte syriaque inédit sur la religion des Mages,' *Bulletin of the School of Oriental Studies* (Univ. of London), 9 (1937–39), 588 f., a text of Johannan bar Penkaye (7th c.), who speaks of the Magi as descended from the Chaldeans.

[531] Philostratus, *Vita Apollonii*, 1, 2, 1; Lucian, *loc. cit.*; Iamblichus, *De vita Pythagorica*,

mon Greek synonym for Chaldaea.[532] More important, the *Oracula Chaldaica* may actually contain faint echoes of authentic Zoroastrianism.[533] Perhaps most decisive of all is the verdict of George Scholarius, who says that Pletho first heard of Zoroaster from the Jew Elisaeus and that Pletho's entire metaphysical system (and hence most of what he knew about Zoroaster) was plagiarized from Proclus.[534] The most that Pletho did on his own initiative in connecting Zoroaster with the *Oracula Chaldaica*, if we assume that he could not have appealed here to Elisaeus or the lost commentary of Proclus (n. 559 *infra*), was to assume that, since Zoroaster was reputed to be not only a Chaldaean and the teacher of the Chaldaeans (*Mages*, 1, 36) but also the first important philosopher and theologian in history, the *Oracula Chaldaica* would inevitably contain the doctrine of Zoroaster himself.

What we read in Pletho about Zoroaster, therefore, was derived directly from his sources; it was not a matter of his own invention. Nevertheless, he seems to have felt some qualms about the propriety of boldly equating Zoroaster, the *Oracula Chaldaica*, and Plato, and explains that he attributes the philosophical principles of Pythagoras and Plato to Zoroaster,

> the most ancient of the scholars known to us, not because we think that he invented them (for they are as old as the universe . . .), but because he antedates all the other teachers of sound doctrine, whose names have come down to us, being, it is said, more than 5,000 years anterior to the return of the Heracleidae.[535]

Thus, Pletho's comparison of Plato and Zoroaster was a typical example of his metaphysical conservatism and of his predilection for the ancient philosophers. Truth, Proclus had said, is as old as being.[536] Concurring in

4, 19 (13. 12 ff.). Cf. Porphyry, *Vita Pythagorae*, 6, 12, and 41 (19.24–20.5, 23.7 ff., 38.14 ff.); Clement, *Stromata*, 1, 15, 66, 2, ed. Stählin, 2, 41.30; Diogenes Laertius, 8, 3. For a sketch of the historical antecedents of the transfer of the Magi from Iran to a Chaldaean environment, see *Mages*, 1, 33 ff., n.b. 36; cf. Bidez, 'Les écoles chaldéennes sous Alexandre et les Séleucides,' *Annuaire de l'Institut de philologie et d'histoire orientales et slaves*, 3 (1935), 41–89.

[532] Baumstark, *s.v. Babylonia*, PW, 2 (1896), 2705.61 ff.; *idem*, *s.v. Chaldaia*, PW, 3 (1899), 2044.7 ff.

[533] *Mages*, 1, 160 f.

[534] Edd. Petit, etc., 4, 152.38 ff., 153.19 ff., 162.3 ff.; *Mages*, 2, 260–2; translated p. 291 *infra*. Täschner's objection (BNJ, 8 [1929–30], 109 f.) that ancient literature did not justify Pletho in assigning Zoroaster a place of great prominence in his system thus falls to the ground. He questions (*loc. cit.*) 'Die einfache Filiation, auf der er [*sc.* Plethon] seine Lehre gründet (Zoroaster-die Magier-Pythagoras-die Pythagoräer-Platon-die Neuplatoniker-er selbst, Plethon)' – a 'filiation' which the above analysis completely vindicates.

[535] Alexandre, 252.9 ff.: ἐς ὃν [*sc.* Ζωροάστρην] ἡμεῖς, ἕνα δὴ ἄνδρα ἀρχαιότατον τῶν γε ἐν μνήμῃ τὰ τοιαῦτα ἀναφέρομεν τῶν δογμάτων, οὐκ ἀπ' ἐκείνου καὶ ἤρχθαι ἡγούμενοι αὐτά· συναΐδια γὰρ ἂν τῷ παντὶ οὐρανῷ . . . ἀλλ' ὅτι τῶν ἐς ἡμᾶς ὀνομαζομένων οὗτος δογμάτων τῶν γε ὀρθῶν ἐξηγητής ἐστιν ὁ παλαιότατος, πλείοσιν ἢ πεντακισχιλίοις ἱστορούμενος τῆς Ἡρακλειδῶν καθόδου ἔτεσι πρεσβύτερος. Cf. n. 485 *supra*.

[536] *Theologia Platonis*, 1, 1 (1.12 f.): τὴν ἀλήθειαν τὴν ὁμοῦ τοῖς οὖσι συνυφεστῶσαν. Psellus

this view, Pletho was anxious to stand as close to its earliest spokesman as he possibly could, and it was partly due to his influence that this conception of the antiquity of Zoroaster and of his relation to the philosophy of Greece took hold among the Italian humanists. As Marsilio Ficino (1433–99) puts it in his *Platonica Theologia*:

In rebus his quae ad Theologiam pertinent sex olim summi Theologi consenserunt, quorum primus fuisse traditur Zoroaster, Magorum caput, secundus Mercurius Trismegistus, princeps sacerdotum Aegyptiorum. Mercurio successit Orpheus. Orphei sacris initiatus fuit Aglaophemus, Aglaophemo successit in Theologia Pythagoras, Pythagorae Plato, qui universam eorum sapientiam suis literis comprehendit, auxit, illustravit.[537]

2. THE CITATIONS FROM PLUTARCH

Plutarch's discussion of the three principal deities of Persia,[538] which Pletho cites, like the date given for Zoroaster,[539] is to be found in the *De Iside et Osiride*. Pletho's interpretation of the three Zoroastrian gods as divinities presiding over three different categories of being may be something of an innovation on his part,[540] although this exegesis is by no means inconsistent with the data provided by Plutarch, who designates Ahura-Mazda, Ahriman, and Mithra as gods of light, darkness, and the realm between these two respectively.[541]

3. TRIADIC DIVISION OF THE UNIVERSE, AND PLETHO'S USE OF PROCLUS

The obscure passage from Plato, which Pletho takes as a reference to the tripartition of the cosmos, is quoted verbatim from the pseudonymous

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in his Ἀπολογία ὑπὲρ τοῦ Νομοφύλακος κατὰ τοῦ Ὀφρυδᾶ says that Zoroaster, whom he mistakenly describes as an Egyptian, was thought to be αὐτοδίδακτος (like Hermes Trismegistus): ed. C. N. Sathas, *Bibliotheca Graeca medii aevi*, 5 (Paris, 1876), 189.

[537] 17.1, 386. Quoted from Bohdan Kieszkowski, *Platonizm renesansowy* (Warsaw, 1935), *q.v.*, 76 ff.

[538] *De Iside et Osiride*, 46 (369E): οὗτος [*sc.* Ζωροάστρης] οὖν ἐκάλει τὸν μὲν Ὡρομάζην, τὸν δ' Ἀρειμάνιον· καὶ προσαπεφαίνετο τὸν μὲν ἐοικέναι φωτὶ μάλιστα τῶν αἰσθητῶν, τὸν δ' ἔμπαλιν σκότῳ καὶ ἀγνοίᾳ, μέσον δ' ἀμφοῖν τὸν Μίθρην εἶναι· διὸ καὶ Μίθρην Πέρσαι τὸν Μεσίτην ὀνομάζουσιν. A few lines below (47 [370A]), Plutarch had said: εἶθ' ὁ μὲν Ὡρομάζης τρὶς ἑαυτὸν αὐξήσας ἀπέστησε τοῦ ἡλίου τοσοῦτον ὅσον ὁ ἥλιος τῆς γῆς ἀφέστηκε . . ., which Pletho in a curious confusion takes over (indicated by dots of omission in the passage reproduced in n. 485 *supra*) as ἀλλ' Ὡρομάζην [thus accented] μὲν ἡλίου, ὅν γε δὴ καὶ Κῦρον περσιστὶ καλεῖσθαι (So Plutarch, *Artaxerxes*, 1, 1012A), τριπλάσιον ἑαυτὸν ἀφεστακέναι, Μίθρην δὲ δηλονότι, τὸν μετά γε Ὡρομάζην, διπλάσιον. Cf. *Mages*, 2, 253 f.

[539] Plutarch, *De Iside et Osiride*, 46 (369E): ὥσπερ Ζωροάστρης ὁ μάγος, ὃν πεντακισχιλίοις ἔτεσι τῶν Τρωικῶν γεγονέναι πρεσβύτερον ἱστοροῦσιν. On the date of Zoroaster, cf. n. 535 *supra* and *Mages*, 1, 13 f., 103; 2, 7 ff., 12 n. 7, 24 n. 1, 73 n. 4.

[540] So *Mages*, 2, 254.

[541] See text cited in n. 538.

Second Epistle.[542] Its meaning is still in dispute. Christian writers, including Justin Martyr, Eusebius of Caesarea, Cyril of Alexandria, and Pletho's disciple, Bessarion, interpret it as a presage of the Christian Trinity;[543] and the Neoplatonists apply it to one or another of the Neoplatonic triads. In relating it to the tripartition of the universe, Pletho seems to have been influenced not by Plotinus [544] and Porphyry,[545] both of whom quote it to illustrate triads which have no connection with Pletho's, but by Proclus, who cites it in part or *in toto* at least ten times, and, like Pletho, sees in it an epitome of the whole of Plato's theology.[546] For the most part Proclus uses this text from the *Second Epistle* as proof of the derivation of the universe from the One and the Good (*τὸ ἓν καὶ τὸ ἀγαθόν*), which he identifies with the first king in pseudo-Plato. But in one long passage in the *Theologia Platonis* where these words are quoted, he speaks in very general terms of secondary and tertiary grades of being after the One, although here too he stresses the clauses which pertain to the transcendent One. While direct quotation of these words from the *Second Epistle* cannot be excluded, it is possible that Pletho came upon them also in Proclus's lost commentary on the *Oracula Chaldaica* (see n. 559 *infra*) with exegesis that provided the inspiration for their citation in this context.

The doctrine of the trichotomy of the universe is of considerable importance in Pletho's system. It appears not only in his notes on the *Oracula Chaldaica*,[547] which seems to have been one of his early works,[548] but also in

[542] 312E. See Franciscus Novotný, ed., *Platonis epistulae commentariis illustratae* (Brno, 1930), 73–80.

[543] Novotný, *loc. cit.* Justin Martyr, *Apology*, 1, 60; Clement of Alexandria, *Stromata*, 5, 14, 103, 1, ed. Stählin, 2, 395.12 ff.; Eusebius, *Praeparatio evangelica*, 11, 20, MPG, 21, 901BC; Cyril, *Contra Julianum*, 1, MPG, 76, 553B ff.; Bessarion, *In calumniatorem Platonis*, 2, 5, 3, ed. Ludwig Mohler, *Kardinal Bessarion als Theologe, Humanist u. Staatsmann*, 2 (*Quellen u. Forschungen aus dem Gebiete d. Geschichte*, herausg. v. der Görres-Gesellschaft, 22 [Paderborn, 1927]), 96.2–4: this triad, Bessarion is careful to point out, is very different from the Christian Trinity (*ibid.*, 94.31 ff.).

[544] *Enneads*, 5, 1, 8 (*τὸ ἕν, νοῦς, ψυχή*).

[545] *Apud* Cyril, cited by Novotný (*τἀγαθόν, δημιουργός, ἡ τοῦ κόσμου ψυχή*).

[546] Add to the passages cited by Novotný, *op. cit.*, 75: In *Rem Publicam*, 1, 287.11 ff.; *Theologia Platonis*, 2 (102, end of the page, through 107, second paragraph, and *passim*); *De malorum subsistentia*, 203.20 f., 267.1 ff. *In Parmenidem*, 1067.23 ff.; cf. 1081.1 ff., 1096.19 ff., 1115.20. On the importance of *Epistulae*, 2, 312E, as a key to the whole of Plato's theology, see *Theologia Platonis* (105.16 ff.): *σκεψώμεθα δὲ ἐφεξῆς καὶ τῶν δογμάτων ἕκαστον* [the basic ideas here are the phrases in 312E concerning the relation of the grades of being] *καὶ ταῖς περὶ τῆς αἰτίας ἐννοίαις ἐφαρμόσωμεν, ἵνα κἀκ τούτων τὸν τῆς ὅλης θεολογίας σκοπὸν περιλάβωμεν τῷ λογισμῷ*. Cf. *ibid.*, 1, 5 (12.27 ff.).

[547] See n. 485 *supra*.

[548] Bidez and Cumont suggest (*Mages*, 1, 160; 2, 252) that the omission of Πλήθων from some of the manuscripts of the commentary on the *Oracula Chaldaica* may indicate that this work was written before George Gemistus added Pletho to his name.

the *Nomoi*, his *chef d'oeuvre*, which comes at the end of his career.[549] It is to be noted, however, that the text of the *Oracula Chaldaica* in connection with which Pletho discusses the triadic division contains no allusion to that subject,[550] although references to it do occur in certain verses of the *Oracula Chaldaica* preserved by Proclus,[551] which probably once formed a part of the corpus whence Pletho's collection of *Oracula* was derived. But no statement in even the fullest version of the *Oracula Chaldaica* lends itself to Pletho's definition of the three grades of existence except in a very general way; and the sources of this conception must be sought in the Neoplatonists, especially in their commentaries [552] on the *Oracula*.

In our discussion of Pletho's sources we may pass over Plotinus altogether despite his importance as the fountainhead of Neoplatonic thought in general and of a number of the Neoplatonic concepts to be examined below in particular, because he never deals with the *Oracula Chaldaica* (which is the context out of which Pletho's words arose). Similarly, we may omit Porphyry, Iamblichus, and Syrianus from consideration, less because of the loss of the treatises they had written on the *Oracula Chaldaica* than because of a statement by George Scholarius, which is abundantly confirmed by investigation, that Pletho's philosophy was cast in a Procline mold. Apostrophizing Pletho, he says:

> As for this Zoroaster, and Minus, and Eumolpus, and Lycurgus, and Polyeides, and Teiresias, and the others whom you cite [in *Nomoi*, 1, 2], you have never had access to their books, which, you would have us believe, were your authorities for this treatise on the laws [the *Nomoi*], except insofar as they have been mentioned in the works of other writers. Knowledge of these persons, thus obtained, you possess in no more abundant measure than any other scholar. But in point of fact, all you know about them you have collected from later authors, from followers of Pythagoras, or rather

[549] Alexandre, 94 (end)–96.1 ff., 116.1 ff., 180.10 ff., 244.12 ff. On the date of the *Nomoi*, see *ibid.*, xx f.; *Mages*, 2, 255 n. 1.

[550] In the edition of Opsopoeus.

[551] Ed. L. H. Gray in A. V. Williams Jackson, *op. cit.*, 261.7–10:

εἰς τρία γὰρ νοῦς εἶπε πατρὸς τέμνεσθαι ἅπαντα,
οὗ τὸ θέλειν κατένευσε, καὶ ἤδη πάντ' ἐτέτμητο.
εἰς τρία γὰρ εἶπε νοῦς πατρὸς ἀϊδίου
νῷ πάντα κυβερνῶν.

The first two lines are cited by Proclus, *In Timaeum*, 3, 243.20 f., and *In Parmenidem*, 1090.34–1091.9, the latter of which (1091.1–5) speaks of a triadic division (ἐν νοεροῖς, ἐν ὑπερκοσμίοις, ἐν αἰσθητοῖς) in which πᾶν τὸ ὀπωσοῦν τοῦ εἶναι μεταλαγχάνον participates. Cf. Damascius, *Dubitationes et solutiones*, ed. C. E. Ruelle, 1 (Paris, 1889), 253.25 f.; 2, 60.28 f., 62.28. For the text see Bidez, 'Ad *Oracula Chaldaica*, v. 7–8 = p. 18.3 Kroll,' *Revue de Philologie*, 26 (1902), 180 f.

[552] Marinus, *Vita Procli*, 26 (44.31–48.22). For other medieval allusions to Neoplatonic commentaries on the *Oracula Chaldaica*, see Bidez, *Catalogue*, 76.20 ff., 83 ff.; Kroll, *op. cit.* (n. 474 *supra*), 2–10; C. N. Sathas, 'Sur un ouvrage de Porphyre,' BCH, 1 (1877), 318–20. Cf. n. 559 *infra*.

of Plato, who have written bulky tomes on polytheism, that false religion, setting forth views, which for the most part even [553] Plato himself never sponsored. One of the latest of these, the most extreme of all, was Proclus, from whose numerous books you have gleaned these pitiful scraps. In spite of this, you claim to follow Plutarch, Plotinus, Iamblichus, and Porphyry; and you fail to cite Proclus, upon whom you chiefly rely, your crafty heart set upon winning for yourself credit for great originality. But those who have read – and condemned – Proclus recognize the source of this work [the *Nomoi*] as well as I.[554]

Another possible model, it is tempting to add, is Psellus, the great scholar and Platonist of the eleventh century, who brought out an edition of, and commentary upon, the *Oracula Chaldaica* which undoubtedly owed much, indirectly at least, to Proclus's no longer extant commentary thereon.[555] We cannot here go into a comparative study of these two medieval philosophers; but there is no reason to doubt that they held many views in common, and it is scarcely probable that Pletho could have been altogether unfamiliar with the works of so prominent and so learned a Neoplatonist and exegete of the *Oracula Chaldaica*. Still, it is clear that, whether Pletho had studied Psellus or not, he was at many points independent of his illustrious predecessor. Thus, his edition of the *Oracula* contains significant readings not found in the manuscripts of Psellus's edition;[556] and his annotations on the *Oracula* differ markedly from those of Psellus, as a comparison of the two commentaries would show. Moreover, the triad as defined by Pletho is not to be found in Psellus's writings that deal with the *Oracula*. But an

[553] Scholarius was an Aristotelian and looked upon Platonism as incompatible with Christianity.

[554] From the letter to Joseph the Exarch (cf. nn. 477 and 479 *supra*), edd. Petit, etc., 4, 162.12 ff.; Alexandre, 423.22 ff.; *Mages*, 2, 261 f.: Ζωροάστρου μὲν οὖν τοῦδε, καὶ Μίνωος, καὶ Εὐμόλπου, καὶ Λυκούργου, καὶ Πολυείδου, καὶ Τειρεσίου, καὶ τῶν ἄλλων οὓς ἀριθμεῖς, οὐδὲ βιβλίοις ἐνέτυχες, ὅθεν ἂν τὴν νομοθεσίαν ταύτην εἶχες λαβών· πλὴν ὅσον πολλοὶ ἕτεροι ἔνιά που αὐτῶν ἀπομεμνημονεύκασιν, ὅθεν οὐ σοὶ μᾶλλον ἢ καὶ πᾶσι σπουδαίοις ἡ περὶ αὐτῶν εἴδησις γέγονεν. Ἀλλ' ἐκ τῶν ὑστέρων μᾶλλον πάντ' ἔχεις συνειλοχώς, οἳ Πυθαγόραν καὶ ἔτι μᾶλλον Πλάτωνα προστησάμενοι, τὰ πλεῖστα μηδ' αὐτῷ Πλάτωνι δεδογμένα περὶ τῆς πολυθέου πλάνης ἐν βιβλίοις συνεγράψαντο πολυστίχοις, μετὰ τοὺς πλείστους δὲ αὐτῶν καὶ ὑπὲρ πάντας τοὺς ἐν αὐτοῖς ἄκρους, Πρόκλος, οὗ τῶν πολλῶν βιβλίων ταυτὶ τὰ βραχέα ἐσπερμολόγησας. Καίτοι Πλουτάρχῳ μὲν σύ γε καὶ Πλωτίνῳ καὶ Ἰαμβλίχῳ καὶ Πορφυρίῳ λέγεις ὁμολογεῖν, Πρόκλον δέ, τὸν αἰτιώτατόν σοι γενόμενον, σιωπᾷς, τὴν τοῦ πρῶτος ἐφευρηκέναι τὰ πλεῖστα δόξαν σεαυτῷ σοφιζόμενος. Ἀλλ' οἱ Πρόκλον ἀνεγνωκότες, ἅμα δὲ καὶ κατεγνωκότες, συνοίδασί μοι τὴν τῶν λόγων τούτων πηγήν. Almost identical is a passage from a letter of George Scholarius (περὶ τοῦ βιβλίου τοῦ Γεμιστοῦ) to Princess Theodora (cf. n. 477 *supra*), edd. Petit, etc., 4, 153.19 ff.

[555] MPG, 122, 1124–53. According to L. G. Westerink, 'Proclus, Procopius, Psellus,' *Mnemosyne*, 3a ser., 10 (Leiden, 1941–42), 275–80, what Psellus knew of Proclus's commentary on the *Oracula Chaldaica* was derived from the fragments contained in a no longer extant work of Procopius of Gaza. Psellus, in turn (*ibid.*, 280), was the source for Nicephorus Gregoras, who makes use of the *Oracula Chaldaica* in his Εἰς τὸν Συνεσίου περὶ ἐνυπνίων λόγον (MPG, 149, 521–641). See Dodds, JRS, 37 (1947), 55 f., 59 f.; cf. Bidez, *Catalogue*, viii, 21, 107–13; Kroll, *op. cit.* (in n. 474 *supra*), 2 ff.

[556] *Mages*, 1, 158 f.

analysis of the three components of the triad in terms somewhat suggestive of Pletho occurs in Psellus's *De omnifaria doctrina* and in his treatises on the soul.[557] In these matters, however, Psellus depends heavily upon Proclus, whose commentary on the *Timaeus* he at many points reproduces verbatim.[558] Most important of all, his discussion of the triad does not contain two vital elements of Pletho's definition, namely the triadic division of the universe specifically designated as such, and the use of the predicate ἀΐδιος in this context for the middle member of the triad, both of which occur in Proclus, as we shall see.

In this brief sketch it is impossible to enter into further consideration of Pletho's putative sources. It is difficult, however, to dissent from the opinion of George Scholarius that Proclus was Pletho's chief philosophical authority. Presumably most relevant for the present investigation would have been Proclus's lost treatise on the *Oracula Chaldaica*, to the composition of which he is said by his biographer to have devoted five whole years.[559] But no less important for the theory of the trichotomy of the universe are his *Elements of theology* and his commentary on Plato's *Timaeus*, from which, it may be conjectured, the commentary on the *Oracula Chaldaica*, on this subject at least, could hardly have differed. Indeed, inasmuch as neither Psellus nor Nicephorus Gregoras seems to have had access to Proclus's commentary on the *Oracula Chaldaica* except by way of fragments preserved in other works, it is probable that Pletho also had to depend upon second-hand materials of this sort, the best and most authoritative guide to the understanding of which would have been the extant writings of Proclus himself.

Pletho's triad was apparently derived from Plato as interpreted by Proclus. In the *Timaeus* Plato says that the creator 'in fashioning the universe put mind in soul and soul in body. . . .'[560] This text, which is reproduced in

[557] E.g., MPG, 122, 688–784, 1029–1113; e.g., 712C; C. E. Ruelle, 'XLII chapitres inédits et complémentaires du recueil de Michel Psellus intitulé Διδασκαλία παντοδαπή,' *Annuaire de l'Association pour l'encouragement des études grecques en France*, 13 (1879), 230 ff., *n.b.* 250 ff. (περὶ ψυχῆς). Cf. also Psellus, *In psychogoniam Platonis*, MPG, 122, 1081ABC, and n. 558 *infra*.

[558] Bidez, 'Psellus et le commentaire du Timée de Proclus,' *Revue de Philologie*, 29 (1905), 321–7, lists the passages from Proclus's *In Timaeum* reproduced by Psellus verbatim in his *In psychogoniam Platonis* and in certain of his minor works. Psellus's *De omnifaria doctrina* borrows extensively from Proclus's *Elements of theology* (Dodds, *Proclus*, xxx n. 7).

[559] Marinus, *Vita Procli*, 26 (45.20 ff.). Of this work, only a few fragments remain, ed. Albert Jahn, *Eclogae e Proclo de philosophia Chaldaica sive de doctrina Oraculorum Chaldaicorum* (Halis Saxonum, 1891); J. B. Pitra, *Analecta sacra et classica Spicilegio Solesmensi parata*, 5.2 (Paris, 1888), 192–5. A brief summary of Proclus's commentary has been preserved in Psellus's accusation of the Patriarch Caerularius, ed. C. N. Sathas, 'Ouvrage perdu de Proclus,' BCH, 1 (1877), 316–18; cf. Bidez, *Catalogue*, 73 ff., 85 f. See Dodds and Westerink, n. 555 *supra*.

[560] *Timaeus*, 30B: . . . νοῦν μὲν ἐν ψυχῇ, ψυχὴν δ' ἐν σώματι συνιστὰς τὸ πᾶν συνετεκταίνετο . . .

the full recensions of the *Oracula Chaldaica* [561] (but not in Pletho's abridgment), is used by Proclus as proof of the triadic division of the universe.[562] Then, taking these words as signifying that the universe is divided into three parts, *νοῦς* (or *νοερὰ ζωή*), *ψυχή* (*ψυχικὴ ζωή*), *σῶμα* (*σωματοειδὴς ζωή*),[563] Proclus develops the familiar Plotinian triad of *νοῦς*, *ψυχή*, *σῶμα* [564] by the method of analysis through mean terms, which he had learned from Iamblichus.[565] The middle term here, he says, like Pletho in another section of the commentary on the *Oracula*,[566] is the soul.[567] It holds this central position, he maintains, in language reminiscent of Plotinus, who had also placed the soul between the intelligible world and the world of sense,[568] because it stands intermediate between the realm of the eternal (*νοῦς*, described as *τὸ νοητόν*, *τὸ ὄντως ὄν*, *αἰώνιος*, *ἀγένητος*, *ἀμέριστος*) and the temporal (*σῶμα*, *τὸ αἰσθητόν*, *τὸ οὐκ ὄντως οὐκ ὄν*, *τὸ ἔγχρονον κατὰ τὴν οὐσίαν*, *τὸ γενητόν*, *τὸ μεριστόν*)[569] – the sphere of the mortal (*θνητόν*),[570] of that which, being

[561] *Oracula Chaldaica*, ed. L. H. Gray, *loc. cit.*, 267.152 f.:

νοῦν μὲν ἐνὶ ψυχῇ, ψυχὴν δ' ἐνὶ σώματι ἀργῷ
ἡμέων ἐγκατέθηκε πατὴρ ἀνδρῶν τε θεῶν τε.

Cf. *ibid.*, 269.220 f. These two lines are cited by Proclus, *In Timaeum*, 1, 318.13 ff., 408.19 f.

[562] *In Timaeum*, 2, 103.6–23: . . . *διελὼν* [*sc.* Plato] *γὰρ τριχῇ τὸ πᾶν, εἰς νοῦν καὶ ψυχὴν καὶ σῶμα περὶ τῶν ὑφειμένων πρώτων τοιεῖται τὸν λόγον*. See following note and *ibid.*, 1, 398.25 f.; 2, 107.2 ff., 19 ff.; 2, 251.23 ff.

In all Neoplatonic systems, of course, the universe (*ἅπαντα* and the like) stands below the highest principle, the transcendent One (*τὸ ἕν*), which is the source of all being and of the progression of all lower forms of existence. There is nothing distinctive about the triadic arrangement in itself, which was a commonplace of Greek philosophy from early times (see Aristotle, *De caelo*, 1, 1), and played an important role in all Neoplatonic writings. Cf. Proclus, *Elements of theology*, prop. 20.

[563] *In Timaeum*, 2, 140.1 ff., 24 ff.: *τριχῇ δ' οὖν πάντα διέλωμεν καὶ διελόντες . . . ὥστε τριπλῆν ζωὴν ἔχει τὸ πᾶν, τὴν σωματοειδῆ, τὴν ψυχικήν, τὴν νοεράν*. Cf. *ibid.*, 133.17 f.

[564] Plotinus, *Enneads*, 5, 1, 10; 5, 5, 9, etc. This, the second of Plotinus's two principal triads, applies to the individual; the other (*ἕν*, *νοῦς*, *ψυχή*) applies to the realm of metaphysics (*Enneads*, 5, 1, 1–12).

[565] Dodds, *Proclus*, xxii.

[566] Alexandre, 276.15 ff.; Opsopoeus, *op. cit.*, 34–38: *τρίτον δὲ μεταξὺ τούτοιν εἶδος, τὴν ψυχὴν τίθενται* (*sc.* the Pythagoreans and the Platonists, Alexandre, 276.4 ff.) *τὴν λογικήν* . . . This whole passage (*ibid.*, 276.4–278.3), with its references to the vehicle of the soul (*τὴν ψυχὴν σώματι ἀεὶ συνεῖναι αἰθερίῳ, οἷον ὀχήματι ἑαυτῆς*), to the irrational functions of the soul (*ὃ δὴ ψυχῆς λογικῆς εἴδωλον οἱ σοφοὶ καλοῦσιν*), to the souls of demons and of stars, etc., echoes familiar Neoplatonic doctrines. For a guide to Proclus's views on these matters see *In Timaeum*, 2, 148.31–149.3, and *Elements of theology*, props. 184–211, with the commentary of Dodds, 294–310, 313–21. Cf. also Psellus, *De anima*, MPG, 122, 1041A–1044A, 1048C–1052A, 1056B, 1068CD, 1072D ff., and *passim*.

[567] *In Timaeum*, 2, 104.17 ff., 105.3 ff., 127.27–131.26; cf. 131.27–132.6.

[568] *Enneads*, 4, 8, 7 f.; cf. 5, 1, 7.

[569] *In Timaeum*, 2, 135.23 ff., 137.17 ff., 140.1 ff., 24 ff., 148.5 ff., 18–149.3, 150.25 ff., 293.3–294.24; 2, 1.9–2.9; see also the texts cited in n. 567 *supra*.

[570] Proclus, *In Rem Publicam*, 2, 270.28: *θνητὸν μὲν οὖν ἐστιν εἰς ὃ κάτεισιν ψυχή*. Cf. *In Timaeum*, 3, 242.9–243.21. See Pletho's *Ζωροαστρείων τε καὶ Πλατωνικῶν δογμάτων συγκεφαλαίωσις*: . . . *περὶ δὲ αὖ ἡμῶν αὐτῶν, πρῶτον μὲν ὡς θεοῖς ἡ ψυχὴ ἡμῶν οὖσα συγγενὴς ἀθάνατός τε*

corporeal, perishes by dissolution.[571] Similarly, on the basis of Plato's description of the soul as self-moved (*αὐτοκίνητος*),[572] Proclus declares the soul to be the mean, and the link, between that which is unmoved and that which is extrinsically moved. This notion, which is very common in Proclus, occurs also in a statement made by Pletho on the authority of Proclus in response to a question from Bessarion, in words very similar to those used by Proclus in the *Elements of theology*, a treatise cited by Bessarion a number of times in the inquiry he addressed to Pletho.[573]

The soul, thus defined as the middle term between these extremes, is pronounced by Proclus, quoting Plato, to be 'intelligible as well as the first of created beings, both eternal and temporal, indivisible and divisible' (*νοητὴν ἅμα καὶ πρώτην τῶν γιγνομένων, αἰώνιον καὶ ἔγχρονον, ἀμέριστον καὶ μεριστήν*). By this he means that the soul is in a sense eternal in essence (*τὸ κατ' οὐσίαν μὲν πῇ ὂν αἰώνιον*), though it is temporal in activity (*τὰς δὲ ἐνεργείας ἐν χρόνῳ ποιούμενον*).[574] This concept, which occurs in somewhat similar form in Plotinus, who also speaks of the soul as *ἀΐδιος*,[575] is derived from a statement in the *Laws* of Plato to the effect that the soul and body, while not eternal (*αἰώνιον*), are indestructible (*ἀνώλεθρον*).[576] Proclus cites

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μένει ἐν οὐρανῷ τῷδε τὸν ἅπαντα χρόνον καὶ ἀΐδιος. ἔπειθ' ὡς καὶ σώματι τῷ θνητῷ τῷδε ὑπὸ θεῶν κοινωνήσουσα ἑκάστοτε, ἄλλοτε ἄλλῳ, καταπέμπεται, τῆς τοῦ παντὸς ἕνεκα ἁρμονίας, ὡς καὶ θνητῶν ἀθανάτοις ἔν γε ἡμῖν καὶ εἴδει τῷ ἡμετέρῳ κοινωνούντων, τὸ πᾶν καὶ ταύτῃ αὐτὸ αὑτῷ συνδέοιτο (MPG, 160, 974CD; Alexandre, 266.14 ff.). The body (*σῶμα*) is repeatedly designated as *θνητόν*: Opsopoeus, *op. cit.*, 26.9, 33.4; Alexandre, 100.1, 138.19 f., 140.2, 196.15, and *passim*. The idea that the soul is the link which binds the universe together (cf. Alexandre, 140.1 ff.) is another Neoplatonic commonplace. Cf. Proclus, *In Timaeum*, 1, 405.8 f.: *αὕτη γὰρ ἔσται σύνδεσμος τῶν ἄκρων ὑπεναντίων ὄντων . . .* 402.29 ff.; 2, 130.15 ff., 131.27–132.6; cf. 2, 150.25 ff.; Plotinus, *Enneads*, 3, 4, 3; n. 573 *infra*.

[571] *Elements of theology*, prop. 187, in Dodds's translation: 'Every soul is indestructible and imperishable. For all that is capable of being in any way dissolved or destroyed either is corporeal and composite, or has its being in a substrate': *πᾶσα ψυχὴ ἀνώλεθρός ἐστι καὶ ἄφθαρτος. πᾶν γὰρ τὸ ὁπωσοῦν διαλύεσθαι καὶ ἀπόλλυσθαι δυνάμενον ἢ σωματικόν ἐστι καὶ σύνθετον ἢ ἐν ὑποκειμένῳ τὴν ὑπόστασιν ἔλαχε.*

[572] *Phaedrus*, 245C–D; Proclus, *op. cit.*, prop. 14; cf. 15–20 and Dodds's commentary; cf. Plato, *Laws*, 10, 894B ff.

[573] Proclus, *op. cit.*, prop. 14 (16.23–5): *λείπεται ἄρα τὸ αὐτοκίνητον εἶναι τὸ πρώτως κινούμενον· ἐπεὶ καὶ τοῦτό ἐστι τὸ τῷ ἀκινήτῳ τὰ ἑτεροκίνητα συνάπτον, μέσον πως ὄν, κινοῦν τε ἅμα καὶ κινούμενον.* Prop. 20 defines the soul as *αὐτοκίνητος*, as does Pletho (*Responsio ad Bessarionem*, MPG, 161, 717B–718D), who after some discussion concludes: *Δεῖν γάρ φησιν ὁ Πρόκλος τῶν τε ἀκινήτων καὶ ἑτεροκινήτων τὸ αὐτοκίνητον μέσον εἶναι, καὶ τοῦτο εἶναι τὸ τοῖς ἀκινήτοις τὰ ἑτεροκίνητα συνάπτον . . .* Cf. Proclus, *In Timaeum*, 1, 412.29 f.; 2, 127.33–132.6; cf. 2, 46.27 ff., 64.10–13, 114.15–20; Bessarion, *Ad Plethonem*, MPG, 161, 715A–D, 717A. On the soul as link, see n. 570 *supra*.

[574] Proclus, *In Timaeum* (on 30B), 1, 402.21–23; cf. *ibid.* (on 27D), 1, 234.8–235.17; (on 35A), 2, 147.23–148.5 ff. (see quotation in n. 585 *infra*), 18 ff.; 2, 128.17–19; (on 37A), 293.20 ff.

[575] *Enneads*, 4, 4, 15: *οὐδ' αἱ ψυχαὶ ἐν χρόνῳ, ἀλλὰ τὰ πάθη αὐτῶν . . . καὶ τὰ ποιήματα. ἀΐδιοι γὰρ αἱ ψυχαί . . .*

[576] 10, 904A.

this text five times in his commentary on the *Timaeus* to illustrate the nature of the soul, which is eternal in essence (*οὐσία*), but cannot, because of its activity in time, be designated simply as eternal without some qualification.[577]

These distinctions are defined with greater precision in the *Elements of theology*, where the soul, because of its being self-constituted, is stated to be perpetual (*ἀΐδιος*); for, Proclus says, all that is self-constituted is *ἀΐδιος*.[578] The soul could not have been classified in this category of being, he argues, had it had a beginning or end in time, since that which has a beginning or end in time is not self-constituted.[579]

In order, therefore, to preserve the doctrine of the immortality of the soul, whose sojourn in the human body has a beginning and end in time, Proclus denies that the soul in its essence (*οὐσία*) could have a beginning or end in time.[580] Pletho also makes this point when he avows that the middle term in his triad, though temporal and movable, was not created in time and would never be destroyed.[581] For Proclus, as for Pletho, this denial carries with it the distinction between temporal activity, which is consistent with the character of the self-constituted, and temporal essence, which is not. This distinction is formally established by Proclus, who concludes that 'intermediate between that which is wholly eternal (*viz.* in respect both of essence and of activity) and that which has its essence in time there is a principle eternal in one regard but in another measured by time.'[582] This mediate

[577] *In Timaeum*, 1, 235.16 f.: *ἀγένητον ἄρα καὶ γενητὴν αἰώνιόν τε καὶ οὐκ αἰώνιον αὐτὴν* [*sc.* *ψυχὴν*] *λέγοντες ὀρθῶς ἐροῦμεν*. 2, 99.28–100.1 ff.: *τὴν . . . ψυχὴν αὐτὸς* [*sc.* Plato] *ἐν Νόμοις ἀθάνατον μὲν εἶναί φησι καὶ ἀνώλεθρον, οὐκ αἰώνιον δέ*. 2, 125.8 f.: *διὸ πῇ αἰώνιόν ἐστιν ὡς ἀνώλεθρον, ἀλλ' οὐχ ἁπλῶς αἰώνιος*. 2.148.29 ff.: *ψυχὴ δὲ οὐκ αἰώνιος παντελῶς . . . μετέχουσά πῃ γενέσεως*. 3.59.12 ff.

[578] Prop. 49: *πᾶν τὸ αὐθυπόστατον ἀΐδιόν ἐστι*. Prop. 189 (164.22 f.): *ἡ ψυχὴ ἄρα αὐθυπόστατος καὶ ἑαυτὴν ὑφίστησιν*. Pletho was undoubtedly familiar with Proclus's views of the *αὐθυπόστατα* as outlined in the *Elements of theology* and in the commentary on the *Parmenides* of Plato, both of which are mentioned by Bessarion in a letter he wrote to Pletho: MPG, 161, 715ABC.

Pletho's quotation from the *Elements of theology*, which reproduces the exact words of Proclus except for a few insignificant changes (n. 573 *supra*), proves that he used Proclus at first hand and not through the medium of a summary like that contained in the diatribe of Nicholas of Methone (*ca.* 1150), *Ἀνάπτυξις τῆς θεολογικῆς στοιχειώσεως Πρόκλου Πλατωνικοῦ*, ed. J. T. Voemel, *Initia philosophiae ac theologiae ex Platonicis fontibus ducta*, 4 (Frankfurt a. M., 1825), whose sections (pp. 27–29, 36–38) on props. 14 and 20 omit the passage of Proclus quoted by Pletho.

[579] Prop. 51.

[580] *In Timaeum*, 2, 102.27–30, 114.33–115.5, 117.20 ff. When the soul is spoken of as *πρεσβύτερον* and the body as *νεώτερον*, Proclus says, *οὐ κατὰ χρόνον ληπτέον . . . ἀλλὰ τῇ τάξει τῆς οὐσίας* (114.33 ff.); *Elements of theology*, props. 49–51, 106–7, and 191, with Dodds's annotations, 226 f., 255, 298 f.

[581] Alexandre, 96.4 ff.: *τὸ δ' ἔγχρονον μέν, ἅτε κινούμενον τῷ πλείστῳ ἑαυτοῦ, ἀΐδιον μέντοι, καὶ οὔτ' ἂν ἠργμένον χρόνῳ, οὔτ' ἄν ποτε παυσόμενον*.

[582] Prop. 106: *παντὸς τοῦ πάντῃ αἰωνίου κατά τε οὐσίαν καὶ ἐνέργειαν καὶ τοῦ τὴν οὐσίαν ἔχοντος ἐν χρόνῳ μέσον ἐστὶ τὸ πῇ μὲν αἰώνιον, πῇ δὲ χρόνῳ μετρούμενον*. The translation is from Dodds, 95,

term, Proclus says, is the participated soul, which is perpetual in essence (*οὐσία*) but temporal in activity.[583]

As for Pletho's use of perpetual (*ἀΐδιος*) with regard to the middle term of his triad, it should be noted (a) that according to Proclus the soul is perpetual (*ἀΐδιος*) because it is self-constituted,[584] (b) that, if Proclus at one point declares the soul to have eternal essence (*οὐσίαν αἰώνιον*) and to be eternal according to essence (*αἰώνιος κατ' οὐσίαν*),[585] he also refers to it as perpetual according to essence (*κατ' οὐσίαν ἀΐδιος*),[586] and (c) that he puts the soul in the class of those things that exist forever (*τῶν ἀεὶ ὄντων*), which he defines as the exact equivalent of perpetual (*ἀΐδιον*).[587]

The foregoing analysis of Pletho's triad affords a specific instance of the general proposition stated above (Part II, sect. VI, 1 f.) that Pletho's insistence upon the identity of the philosophical principles associated with the names of Zoroaster, Plato, and the *Oracula Chaldaica* rests upon his sources. Thus, near the beginning of the *Oracula Chaldaica*, which, as we have seen, Pletho connects with Zoroaster by way of inference from the Greek tradition, there is a line according to which the 'mind of the Father called for a threefold division of the universe.'[588] A little farther on in the same work there occurs the statement, 'the father of men and gods placed mind in soul and soul in our vacant body.'[589] Taken together, these two passages echo the text of Plato (*Timaeus*, 30B), from which Proclus derives the doctrine of the tripartition of the universe. In citing the latter of these two passages from the *Oracula Chaldaica* Proclus makes special note of the agreement of Plato and the *Oracula*,[590] and claims that his views on the soul as the middle term have the endorsement of the *θεολόγοι* (one of his terms for the authors of the *Oracula Chaldaica*).[591]

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except that I substitute 'essence' for 'existence' here and in the other versions quoted from the *Elements of theology*, all of which are taken from Dodds's edition.

[583] Prop. 196 (170.20): *εἰ γὰρ πᾶσα ψυχὴ κατ' οὐσίαν ἐστὶν ἀΐδιος . . .* (For if every soul is perpetual in respect of its essence . . . .). Prop. 191: *πᾶσα ψυχὴ μεθεκτὴ τὴν μὲν οὐσίαν αἰώνιον ἔχει, τὴν δὲ ἐνέργειαν κατὰ χρόνον* (Every participated soul has an eternal essence but a temporal activity). Prop. 192: *πᾶσα ψυχὴ μεθεκτὴ τῶν τε ἀεὶ ὄντων ἐστὶ καὶ πρώτη τῶν γενητῶν* (Every participated soul is of the order of things which perpetually are and is also the first of things of process).

[584] See propositions 49 and 189 quoted in n. 578 *supra*.

[585] Prop. 191 (in n. 583); *In Timaeum*, 2, 147.33–148.2: *αὕτη* [*sc.* *ψυχὴ*] *γάρ ἐστιν ἀκίνητος μὲν κατ' οὐσίαν, κινουμένη δὲ κατὰ τὰς νοήσεις, καὶ αἰώνιος μὲν κατ' ἐκείνην* [*sc.* *οὐσίαν*], *ἔγχρονος δὲ κατὰ ταύτας*. See also the texts cited in notes 574 and 577.

[586] Prop. 196 (in n. 583); *In Rem Publicam*, 2, 270.18: *τὴν ἀΐδιον οὐσίαν τῶν ψυχῶν*.

[587] Prop. 192 (n. 583) and prop. 196: *τὸ δὲ ἀεὶ ὂν ἀΐδιον* (170.24).

[588] Quoted in n. 551 *supra*.

[589] N. 561 *supra*.

[590] *In Timaeum*, 1, 318.10 ff.–319.1, 408.10 ff.; see following note.

[591] *In Timaeum*, 2, 129.22 ff.: *εἰ δὲ μήτε ἐν τοῖς πρώτοις μήτε ἐν τοῖς ἐσχάτοις αὐτὴν* [= *ψυχὴν*]

It is obvious in all this that the fundamental ideas are Plato's (*Timaeus*, 30B), but the exegesis is Proclus's. This is by no means unusual in Neoplatonic circles; and Pletho shows that he was not attempting to conceal what he was doing from his readers or himself when he says:

> We have from Plato a number of treatises which treat of nothing but the first principles of logic, physics, ethics, and theology . . . Plato set forth in his dialogues only the most important theorems and the leading subjects of philosophy; he left it to his associates to work out the details from these materials and from his talks with them.[592]

This passage, and others like it, make it clear that Pletho did not disguise his use of the Neoplatonic exegesis of Plato, whose principal disciples, with the exception of Proclus, he lists in his bibliography in the first book of the *Nomoi*.[593] As we have seen, George Scholarius contends, perhaps rightly, that the name of Proclus had been omitted because of Pletho's reluctance to betray the fact that the leading features of his system had been derived from this single authority.[594] Bidez and Cumont go further and suggest that Pletho's list of the successors of Plato was copied from Psellus's Ἔκθεσις . . . τῶν παρὰ Χαλδαίοις δογμάτων.[595] This is not impossible, but it seems improbable for a number of reasons: (a) According to the passage to which Bidez and Cumont point, Plato and Aristotle had accepted most of the Chaldaean philosophy; and Plotinus, Iamblichus, Porphyry, and Proclus had embraced it without question as the divine word.[596] In Pletho, on the other hand, these names occur near the beginning of the *Nomoi* (1, 2) at the end of a lengthy enumeration of sources which are not mentioned by Psellus.[597] (b) Pletho's list (. . . Pythagoras, Plato, Parmenides, Timaeus, Plutarch, Plotinus, Porphyry, Iamblichus) differs from Psellus's not only in the omission of Aristotle

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τίθεσθαι δυνατόν, μέσην αὐτῇ τινα χώραν δοτέον, καὶ τοῦτο εἰκότως, ἵνα μιμῆται καὶ τὰς πρωτίστας ἑαυτῆς αἰτίας. μέσην γὰρ καὶ ἐν τοῖς θεοῖς ἔχει χώραν ἡ τῆς ψυχῆς αἰτία θεός, ὡς δοκεῖ καὶ τοῖς θεολόγοις, συναγωγὸς οὖσα τῶν δύο πατέρων καὶ ἀπὸ τῶν ἑαυτῆς λαγόνων τὴν τῆς ψυχῆς προϊεμένη ζωήν.

[592] MPG, 160, 983D–984A; Alexandre, 296.25–298.3; *Mages*, 2, 259: παραδίδωσι μὲν οὖν καὶ Πλάτων ὑπομνήματα ἄττα ἀρχῶν μόνον καὶ λογικῆς καὶ φυσικῆς καὶ ἠθικῆς καὶ θεολογίας . . . [the words omitted here are quoted in n. 488 *supra*]. Πλάτων μὲν οὖν ἐν τοῖς διαλόγοις τοῖς αὐτοῦ ἀρχὰς μόνον φιλοσοφίας παραδοὺς αὐτὰ τὰ ἀναγκαιότατά τε καὶ περὶ τῶν μεγίστων, τὰ λοιπὰ εἴασε τοῖς ἑταίροις ἔκ τε τῶν ἀρχῶν τούτων, ἔκ τε ὧν αὐτοῦ διακηκόεσαν, ἀναλαμβάνειν.

[593] *Nomoi*, 1, 2 (Alexandre, 32: citation of Neoplatonic authorities); on the *Oracula Chaldaica* (*ibid.*, 296.25–298.3, 280.1–18, and 252.4 ff., 276.4 f., 277.7; Opsopoeus, *op. cit.*, 34.9 ff., 37.14, 50.5 ff.: Plato, the Pythagoreans, and the Platonists), etc.

[594] N. 554 *supra*.

[595] *Mages*, 2, 256 f.

[596] MPG, 122, 1153AB: τούτων δὲ τῶν δογμάτων τὰ πλείω καὶ Ἀριστοτέλης καὶ Πλάτων ἐδέξαντο. οἱ δὲ περὶ Πλωτῖνον καὶ Ἰάμβλιχον, Πορφύριόν τε καὶ Πρόκλον πᾶσι κατηκολούθησαν, καὶ ὡς θείας φωνὰς ἀσυλλογίστως ταῦτα ἐδέξαντο.

[597] Alexandre, 30–32.

and Proclus, noticed and explained by Bidez and Cumont,[598] but also in the addition of Pythagoras, Parmenides, Timaeus, and Plutarch, and in the order of arrangement (Psellus deviates slightly from the correct chronology by placing Iamblichus before Porphyry,[599] whereas Pletho holds fast to the chronological sequence). (c) Pletho does not so much as allude to the Chaldaean oracles at this point. (d) It is Plato and, to a lesser degree, Pythagoras, the Pythagoreans, and the Platonists (*οἱ περί τε Πυθαγόραν καὶ Πλάτωνα*) upon whose agreement with the Chaldaean oracles Pletho lays stress;[600] he nowhere specifically connects the latter with Plotinus, Porphyry, and Iamblichus.

That Pletho's *Nomoi*, like Neoplatonism in general, was derivative cannot be denied. It is unreasonable, however, to assume that a scholar of Pletho's stature, who had studied Plato and had championed him against the Aristotelians, and who had made his way through at least some of the writings of Proclus, would be unable to prepare a list of the chief thinkers of Greece, whose names appear so frequently in the pages of Plato and Proclus, his favorite philosophers.

Having completed this survey, we can appreciate the magnitude of Pletho's indebtedness to Proclus, without failing to realize that he was a man of vast learning and deep cultivation, who had read widely in all periods of Greek literature (see Part I, *passim*). His metaphysical system was Procline in inspiration and execution, but it drew also upon other representatives of the Greek philosophical tradition, as is evident from his use of Stoicism (see *infra*), Plutarch, and the *Oracula Chaldaica*. Aside from his innovations in neopaganism, which required no little daring and enterprise on his part, he cannot be regarded as an original thinker. He is rather to be judged as a scholar and teacher, who called forth the encomia noticed *supra* (Part I, section 1), and whose enthusiasm for the Greek classics exerted considerable influence upon his contemporaries and, through them, upon subsequent generations.

VII. FATE AND PROVIDENCE. CONCLUSION

Mamalakis, the author of the most recent book on Pletho, rejects Täschner's hypothesis, without giving any reason for doing so, and maintains that Pletho learned nothing from Elisaeus. Nevertheless, he, too, is intent upon uncovering Islamic influence in Pletho, and finds it in Pletho's rigid deter-

[598] *Loc. cit.*: Aristotle, they evidently assume, was omitted because of Pletho's hostility to the Peripatetics, and Proclus for the reasons set forth by George Scholarius (see n. 554 *supra*).

[599] George Scholarius makes this same inversion in the passage quoted in n. 554 *supra*.

[600] See the texts cited in n. 593 *supra* (except for *Nomoi*, 1, 2).

minism (which he derives from the Islamic doctrine of *kismet*) and in Pletho's reference to polygamy (which he believes to have been inspired by the similar institution in Islam).[601] This is not the place for a detailed examination of Pletho's authorities for these two concepts. But it should be noted that his analysis of the problem of fate (εἱμαρμένη) and free will is completely Greek in every detail; his views on this question are very similar to those of the Stoics, whom he names in the *Nomoi* together with Zoroaster and Plato as his sources in the field of ethics.[602]

Moreover, in the course of an exchange of letters on εἱμαρμένη, Pletho's disciple, Bessarion, cites Aristotle, Epictetus, Iamblichus, Ammonius, Olympiodorus, Proclus, Damascius, and Simplicius, while Pletho cites Plato, Aristotle, the Stoics, and a certain Cydones, presumably Demetrius, the fourteenth century humanist.[603] Neither refers to Islamic authorities, and Byzantine scholars like Theodore of Gaza [604] and Matthew Camariotes,[605] who wrote special monographs to attack Pletho's determinism give no indication that they had detected in Pletho any trace of the Muslim belief in *kismet*.

Stéphanou and Beck find a trace of the Islamic idea of *kismet* in the passage in the treatise on the Procession of the Holy Spirit in which Pletho asserts that the misfortunes of the Byzantine Empire were to be explained by the fact that the enemies of Byzantium, presumably the Turks, held more firmly to belief in the providence of God than did the Byzantines (δῆλοι γάρ εἰσιν οἱ πολλοὶ ἐκείνων τὴν τοῦ τὸν θεὸν τῶν ἀνθρωπίνων προνοεῖν δόξαν πολὺ τῶν ἡμετέρων βεβαιοτέραν ἔχοντες ἐν ταῖς ψυχαῖς).[606] But there is nothing fatalistic about this statement nor anything that is inconsistent with the Christian doctrine of the πρόνοια of God. Moreover, in the course of his argument, Pletho argues that if the Byzantines give up their sinful ways, εἴτε δὴ ἐν δόξαις, εἴτε ἐν ἔργοις, God may save them from destruction. This is characteristically Christian teaching, and perfectly acceptable also to ortho-

[601] *Op. cit* (in n. 2 *supra*), 238.

[602] *Nomoi*, 2, 6 (περὶ εἱμαρμένης); *ibid.*, preface (2.8 f., Alexandre); cf. also *ibid.*, 3, 1 (on the same subject, but no longer extant).

[603] MPG, 161, 716D–718A, 720A–724B.

[604] J. W. Taylor, ed., *Theodore Gaza's De Fato, University of Toronto Studies, Philological Series*, No. 7 (Toronto, 1925). Cf. Ludwig Mohler, 'Theodorus Gazes, seine bisher ungedruckten Schriften u. Briefe,' BZ, 42 (1942), 50–75, who takes issue with Taylor on a number of points: 52 f., 67, 73 f.

[605] Matthew Camariotes, *Orationes ii in Plethonem de fato*, ed. H. S. Reimarus (Lugduni Batavorum, 1721).

[606] MPG, 160, 980AB. Hildebrand Beck, *Vorsehung u. Vorherbestimmung in d. theologischen Literatur d. Byzantiner* (*Orientalia Christiana Analecta*, 114 [Rome, 1937]), 106 n. 88; E. Stéphanou, 'Ἡ εἱμαρμένη, etc.' (n. 2 *supra*), 315–20; *idem*, DTC, 12.2 (1935), 2402 f.

dox Islam. But since the implication here is that God can under certain circumstances be persuaded to intervene in the cosmic process and alter the destiny of the universe, or of any portion thereof that He chooses, it has absolutely nothing to do with the popular or folkloristic Muslim conception of *kismet*, which has a fatalistic connotation.[607]

What Pletho means is that it was, in his judgment, unwise for the Byzantine Empire to put its trust in a military alliance with the Latins against the Turks, especially if the aid secured in this way was to be purchased by the surrender of the Byzantine dogma of the Procession of the Holy Spirit. His whole argument is nothing more than an endorsement of the popular prejudice of his contemporaries, who preferred bondage under the Turks to enslavement to Rome (*κρεῖττον ἐμπεσεῖν εἰς χεῖρας τῶν Τούρκων ἢ Φράγκων*).[608] Most important of all, it should be remembered that this tract was written when Pletho was pretending to be a Christian, and does not represent his own views. These are to be found in the pagan *Nomoi*, where, under Stoic influence, he asserts that the decrees of fate, foreordained from all eternity (*τὰ μέλλοντα ἅπαντα εἵμαρταί τε ἐξ αἰῶνος*), are completely immutable and not subject to change by prayers, gifts, or any other considerations whatsoever. In keeping with this principle, he is careful to remark several times in the course of his own prayers that he asks the gods for nothing that is at variance with the eternal ordinances of fate.[609]

Of the chapters of the *Nomoi* which dealt with polygamy nothing remains but the titles: 'on the cohabitation of one man with several women' (*περὶ τῆς ἑνὶ ἀνδρὶ γυναικῶν πλειόνων συνοικήσεως*), and 'on the community of women' (*περὶ τῶν κοινῶν γυναικῶν χρήσεως*).[610] There is nothing in either of these, both of which deal with problems that one would expect to see dis-

[607] Carra de Vaux, *s.v.* Fate (Muslim), ERE, 5, 794–6; *idem*, *s.v.* Kismet, ERE, 7, 738 f.; Duncan B. Macdonald, *s.v.* Ḳadar, *Encyclopaedia of Islam*, 2 (Leiden-London, 1927), 605; *idem*, *The development of Muslim theology, jurisprudence and constitutional theory* (N. Y., 1903), 126 ff., 136 ff., 191 ff., and the special monographs cited by H. Beck, *op. cit.*

[608] Dukas, ed. I. Bekker (Bonn, 1834), 291.3 f.

[609] Alexandre, 64.13 ff.: *πολὺ δ' ἔτι μᾶλλον ἀδύνατον, εἰ τοὺς θεούς τις λέγοι μεταβάλλεσθαί τε περὶ τὰ σφίσιν ὑπὲρ τῶν μελλόντων ἐγνωσμένα, καὶ ἕτερ' ἄττα, παρ' ἃ ἐμέλλησαν ἀποτελεῖν, εἴτε ὑπ' ἀνθρώπων λιταῖς ἤ τισι δώροις παραπειθομένους, εἴτε δὴ καὶ ἄλλως γέ πως αὐτὸ πάσχοντας*. *Ibid.*, 70.14–16: *οὔκουν ἂν εἶναι ἀνάλυσιν, οὐδὲ παρατροπήν τινα, τοῖς ἅπαξ ὑπὸ Διός τε ἐγνωσμένοις ἐξ αἰῶνος, καὶ εἱμαρμένῃ δεδεμένοις*. See also *ibid.*, 64–78. On pagan parallels for these views, see W. C. Greene, *Moira* (Cambridge, Mass., 1944), 339 ff., 423 (57), and *passim*; cf. A. D. Nock, *Conversion*, 100 ff., 288 f.; *idem*, Sallustius, *Concerning the gods and the universe*, 14–16 (see n. 378 *supra*), lxxxi ff., 26 ff.; David Amand, *Fatalisme et liberté dans l'antiquité grecque, recherches sur la survivance de l'argumentation morale antifataliste de Carnéade chez les philosophes grecs et les théologiens chrétiens des quatre premiers siècles* (Louvain, 1945), 6 ff., 20 f., 104 (Maximus of Tyre).

[610] *Nomoi*, 3, 16 & 17 (12.21 f., Alexandre); George Scholarius, edd. Petit, etc., 4, 171.20–23; Alexandre, 439.8–10.

cussed in a code of laws framed by a Platonist, to suggest that they were inspired by specifically Muslim marriage conventions. Concubinage was widespread in ancient Greece (see Athenaeus, *Deipnosophistae*, 13, 555D ff.), and the reference to the 'communism of wives' proves that Pletho was thinking of the doctrine of the communism of women and children that had been advocated by both Plato and the Stoics.

Having thus disposed of Täschner and Mamalakis, we may pass on to consider the somewhat similar position of Bidez and Cumont, who in their valuable monograph, *Les mages hellénisés*, account for the incorporation of "Zoroastrian" elements into the *Nomoi* by reference to Pletho's expectation that his new system of religion would sweep the world and eventually replace both Christianity and Islam. They maintain that he deliberately used Zoroaster as a kind of oriental sop, intended to make his new religion more acceptable to the Muslims. They do not explain, however, why the Iranian form of polytheism should be preferred in Islamic circles to the Hellenic, nor is there any evidence to support their theory that 'désireux de se concilier les esprits dans le domaine de l'Islam, il [*sc.* Pléthon] fut tout naturellement entraîné à faire ressortir une sorte d'harmonie préétablie entre les voix qui lui venaient de l'ancienne Asie et celle de son maître Platon.' [611] If this had been Pletho's intention he would have made more substantial concessions to Islam than an occasional attribution to Zoroaster of metaphysical principles, all of which were derived directly from Plato and the Neoplatonists.

Moreover, there was no conceivable reason why Pletho's use of the name of Zoroaster, who is not mentioned in the Koran and had no significance in Islamic life, religion, or legend, should make the complicated metaphysical polytheism of the *Nomoi* attractive to the Muslims or seduce the faithful from Islam. The fact is that the name of Zoroaster was for Pletho nothing more than a symbol representing the oldest and the most venerable tradition of Greek philosophy. This is demonstrated by the passage translated above,[612] which the authors of *Les mages hellénisés* omit from their reproduction of the passage of which it is a part. Like everything else in the *Nomoi*, Pletho's citation of Zoroaster is explained by his fidelity to Greek sources, in which, as we have seen, he found Zoroaster and the Magi described as the discoverers of astronomy, the first philosophers, the first worshippers of the gods, the first theologians, and the teachers of Pythagoras and Plato.

Some may, perhaps, feel that Pletho has gone beyond the weight of the evidence in inferring as he does (VI, 1 f. *supra*) that the *Oracula Chaldaica*

[611] *Mages*, 1, 162; 2, 252 n.
[612] *Supra*, n. 535.

represent the teaching of Zoroaster. But none can deny that, in regarding the "Zoroastrian" philosophy as the source of Pythagoreanism and Platonism, and in equating what he took to be the Platonic doctrine of the trichotomy of the universe with that of the *Oracula Chaldaica*, he was only reproducing once again the metaphysical conclusions of his primary authorities.

ABBREVIATIONS

ARW: *Archiv für Religionswissenschaft.*
BCH: *Bulletin de Correspondance Hellénique.*
BNJ: *Byzantinisch-Neugriechische Jahrbücher.*
BZ: *Byzantinische Zeitschrift.*
CCAG: *Catalogus codicum astrologorum Graecorum.*
CSCO: *Corpus scriptorum Christianorum orientalium.*
DACL: *Dictionnaire d'archéologie chrétienne et de liturgie.*
DHGE: *Dictionnaire d'histoire et de géographie ecclésiastiques.*
DTC: *Dictionnaire de théologie Catholique.*
EO: *Échos d'Orient.*
ERE: *Encyclopaedia of Religion and Ethics*, ed. James Hastings.
FHG: *Fragmenta historicorum Graecorum*, ed. Müller.
HTR: *Harvard Theological Review.*
JHS: *Journal of Hellenic Studies.*
JLW: *Jahrbuch für Liturgiewissenschaft.*
JRS: *Journal of Roman Studies.*
JTS: *Journal of Theological Studies.*
Mages: Joseph Bidez and Franz Cumont, *Les mages hellénisés, Zoroastre, Ostanès, et Hystaspe d'après la tradition grecque*, 2 vols. (Paris, 1938).
MPG: Migne, *Patrologia Graeca.*
MPL: Migne, *Patrologia Latina.*
PW: Pauly-Wissowa, *Real-Encyclopädie.*
RGVV: *Religionsgeschichtliche Versuche und Vorarbeiten.*

TEXTS AND EDITIONS

In my citations of the following texts, unless otherwise stated, the page and line numbers (which are usually given in parentheses after the reference to book, chapter, section, and the like) are taken from the editions listed below:

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A. Rome: see Theon.

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ADDENDUM

At the last moment, I have come across a new book, *Die Gebetsgebärden d. Völker u. das Christentum* (Leiden, 1948), by Thomas Ohm, who is concerned only incidentally with pagan Greek and Byzantine attitudes of prayer. Though he does not approach the subject by way of the original sources, he has collected a number of interesting references to recent publications, several of which appeared during the war in obscure German periodicals.